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In a study to determine factors which cause or inhibit change in a school organization, 30 schools in five Western States were classified according to degree of innovativeness and organizational climate. Correlations were determined b analyzing four selected variables: Expenditures per student, age of staff, years of st ff service, and size of staff. The study revealed that in contrast to the least innovative schools, the most innovative schools had open climates, higher expenditures per student, lower average age of staff, fewer number of years of staff service, and a larger professional staff. A bibliography of 44 items is included. (JK)

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Project No. 7-8119

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R. Laverne Marcum

March 1968

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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R. Laverne Marcum

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ABSTRACT

A Study of Organizational Climate, Other Variables and the Adoption of Educational Innovations

by

R. Laverne Marcum, Doctor of Education

Utah State University, 1968

Major Professor: Dr. Oral L. Ballam
Department: Educational Administration

Purpose

The purpose of this study was threefold. The first was to determine if there were differences between each of four variables (expenditures, age of staff, years in the school, and number of professional staff) for the most innovative schools and least innovative schools participating in the study.

The second purpose was to determine if differences existed between the teacher and administrator perception of school climate for the most innovative schools and for the least innovative schools.

The third purpose was to determine if differences existed between each of the four variables noted above for the open climate and closed climate schools.

Procedure

State Department of Education personnel from Oregon, Washington, Idaho, Nevada and Utah assisted with the selection of schools for the study by recommending 10 of the most innovative and 10 of the least innovative schools in their state. By use of the Educational Innovation

Checklist, 15 of the most innovative schools and 15 of the least innovative schools were then identified. The Organizational Climate Description Questionnaire was administered to teachers and administrators in these 30 selected schools, mean scores were computed and open and closed climate schools identified.

Mean scores were computed for each of the four variables related to fiscal factors and biographical data which was collected from each school.

An analysis of variance technique using an F ratio was employed to test for differences between the means. A minimum F ratio of .05 was established to recognize the difference as significant.

The F test was applied to determine if significant differences existed between the means of each of the four variables for the two innovative categories. The same procedure was followed for the two climate categories. Finally, the differences were determined between the teacher and administrator perception of climate for the most innovative and for the least innovative schools.

Findings and Conclusions

1. There was a significant difference between school climate and innovativeness. Schools involved in innovation showed open climates.

2. There was a significant difference between expenditures per student for the most innovative and least innovative schools. Expenditures were higher in the most innovative schools.

3. There was a significant difference between the age of the professional staff for the two innovative categories. The professional staff was younger in the most innovative schools.

4. There was a significant difference between the years of service

in the school of the professional staff for the two innovative categories. Educators remained fewer number of years in the schools involved in innovational practices.

5. There was a significant difference between the number of professional staff for the most innovative and least innovative schools. The most innovative schools showed the larger number of professional staff.

6. There was a significant difference between the teacher and administrator perception of school climate in the innovative schools. Administrators viewed the climate as more open than did the teachers.

7. There was no significant difference between the teacher and administrator perception of school climate in the least innovative schools. They both viewed the climate as closed.

8. There was no significant difference between the expenditures per student for the open and closed climate schools. The higher level of expenditures did not influence the school climate toward openness.

9. There was a significant difference between innovational scores for the open and closed climate schools. Open climate schools were also involved in the implementation of innovation in education.

10. There was a significant difference between the age of the professional staff for open and closed climate schools. The average age of the staff was lower in the open climate schools.

11. There was a significant difference between the number of years in the school of the professional staff for the two climate categories. The professional staff remain fewer number of mean years in the open climate school.

12. There was a significant difference between the number of professional staff (size) for the open and closed climate schools. The average number of professional staff was larger for the open climate schools.

CHAPTER I

NATURE AND BACKGROUND OF THE STUDY

Need for the Study

The time in which we live has been characterized as an era of change. Lippitt (1958) suggested that the modern world is, above everything else, a world of change. He believes this is something upon which observers in nearly every field of thought and knowledge are agreed.

These rapid changes, far reaching in scope and significance, impose anxieties upon established institutions. All institutional segments of society are feeling the impact of these forces, and the schools, as a part of society, reflect such social needs and pressures.

Balz (1940) recognized the problem of education in a changing society some years ago when he said:

> The swirl of social change threatens to engulf mankind, and education must strive with double diligence to keep both its balance and its direction.

One outgrowth of our educational system attempting to adjust to the fast changing society has been the amount of public involvement recently evidenced in the field of education. Widespread public concern related to the need for improved educational quality and productivity in the space age has found expression in various interest groups mobilized for educational reform.

Educators also recognize that there are salient problems existing within the educational structure which must be adapted to todays society. Among the most important problem areas where deficiencies and limitations are readily recognized are curriculum development, school organizational patterns and methods of instruction.

It is encouraging that most educators recognize that there are problems existing within the educational enterprise because in the final analysis educators have the responsibility for planning and making change. However, recognition is not the entire answer because between the recognition of a problem and the realization of its solutions, calculated and positive action is necessary.

Realistically speaking then, educational debate today has swung from change versus no change to specific factors which cause or bring about change and pertinent questions relating to determining the change process. As Farnsworth (1940) indicated, scientific investigation of the nature of the processes of change is a legitimate undertaking. It can be reasonably assumed that the most compelling task which faces our educators and educational institutions today is the development of this scientific knowledge.

Lag and Resistance to Change

The concept of change is not new to our society. Every year industry redesigns established products or presents new ones. Agriculture is noted for its ability to make rapid change, and in medicine the estimated time lag between research and practice is only two years.

However, educators have been notoriously slow in introducing innovations and accepting new ideas. In the 1930's Paul Mort reported that when an educational innovation had been introduced to meet a pervasive need, approximately fifteen years elapsed before even three percent of the nation's schools had instituted the change. Adoption rates of innovation increased rapidly after the ten percent point was reached, but complete diffusion in schools appeared to take as much as fifty years.

Rogers (1966) has indicated that 2.5 percent of the schools are innovators; 13.5 percent are early adoptors; 34 percent follow somewhat later; 34 percent follow much later; and 16 percent are notorious laggards. Unfortunately, it may take fifty years for the laggard school districts to eventually adopt an idea begun by one of the innovative schools.

The Systems Development Corporation (Richland, 1965) reports that only a small percentage of the nation's 30,000 school districts have adopted some of the recent changes.

Categorically speaking, educational change over the past few decades has been sparse and superficial, despite the impression of massive change sweeping the educational world which has been conveyed by journals and annual reports. These reports aim largely at surface features. Generally, reports to the American public emphasize the new gadgets, tools or groupings being used, rather than changes on how the student learns, what he knows or how he reacts to his knowledge. Even though there may be outward signs of innovation, there seem to be relatively few changes in what is actually happening between teacher and student.

Almost every educator can point to specific reasons why educational change is such a slow process, but there are a few of these observations which have been repeated often enough to become generalizations. Carlson (1965) has suggested three basic reasons for the slow rate of change in public schools. He cites the absence of a change agent, a weak knowledge base, and what he calls "domestication" of the public schools. Glines (1967) adds to Carlson's list when he points out that the failure of administrators or teachers to accept the inevitability of change and the failure to comprehend the accelerating rate of change are basic causes for the slow rate of change. He also cites another crucial barrier which so many writers in the field have ignored; the emotional upheaval which is involved in any significant change.

Another major area of resistance to change faced by the educator is within the school system itself. Bhola (1966) emphasizes two factors which often cause resistance to change. The first of these is rapidity of change which is superimposed by authoritarian methods and the second, a lack of knowledge and skills needed to incorporate new innovations. He further suggests the disturbance of the status quo, and the accrument of benefits to one part of the organization at the expense of the other part as additional reasons for resistance to change within an organization.

The Huron Public School Study (Halley, 1965) indicated a major reason why people resist change is professional suspicion about the value of the illustrated innovation as implemented. Anything abnormal, unreal, artificial, different, or removed from the classroom situation may cause this suspicion.

Probably the most important factor relating to educators' resistance to change can be found in the approach an administrator takes toward an innovation. Bennis (1962) found that resistance was least in the groups where those to be affected discussed the nature of the change, made plans for effecting change, and as a total group made decisions which were satisfactory to the entire group. He suggests a major principle in preventing resistance is the degree to which an administrator can help groups develop their own understanding of the need for the change and an awareness of their feelings about the change.

Factors Which Influence Change

Fiscal factors. Mort (1946) and his colleagues did much of the early research on variables which influence change. These variables were generally related to the economic base of a school district. Their early studies concluded that school systems which were first to adopt educational innovations spend the most money per child; those last to adopt educational change spend the least amount per child.

According to Ross (1958) the most powerful of all factors which influence change is the level of financial support. In this study three hundred factors were studied for their effect on schools; of these, the amount of money which a school district had to spend for teachers, for supplies, books, equipment, etc. was the most important single influence on adaptability. All studies do not indicate the same result, however. A more recent study by Carlson (1965) on expenditures per child and adoption of educational innovation, did not support Mort's and Ross's findings. In a study of educational innovations in high schools in a county in western Pennsylvania, it was found that the amount of money spent per child had a negative, insignificant correlation. The same general finding was replicated in his research project in West Virginia.

His study there revealed that the rate of adoption of these innovations was not significantly related to expenditures per child.

The Systems Development Corporation (Richland, 1965) studies seem to indicate fiscal considerations are questionable influences in innovation:

> . . . innovations are in practice in many schools throughout the country. Although more prevalent in the districts in above average financial support, innovations are found in some districts with limited resources. The statistical analysis of a number of fiscal variables thought to be important in effecting innovation did not, with the exception of one, result in the significant correlations. The only fiscal variable that was found statistically significant was "highest teacher salary." This variable showed a .53 validity coefficient with the 1966 innovational index; the highest among fifteen variables measured.

Rogers (1962) sums up the matter of expenditures and change when he points out:

> . . . it is important to remember that not all rich schools are innovators and not all schools that innovate are rich.

When considering the fiscal factor and its effect on change in education, it is necessary to consider the effect of outside monies on this change.

The Systems Development Corporation (Richland, 1965) discovered that innovation is often encouraged by foundation grants and federal funds:

> . . . implementation of innovation is often facilitated by acquisition of federal funds or foundation grants. These funds provide seed or risk money and incline to have a pump priming effect.

Glines (1967) further substantiates this concept:

> . . . foundations, such as Ford and Kettering, have been involved in helping to finance the introduction of educational inventions and innovations. Inservice sessions to

> train teachers to teach differently; the development or purchase of new curriculum materials; teaching individuals to use flexible scheduling and other organizational concepts; building new facilities or remodeling existing "egg crates"; and many other pertinent steps, will result in increased costs . . . truly substantive improvement can be accomplished more effectively and more rapidly when additional funds are made available.

Meierhenry (1965) talks about forces affecting the change process and cites the monetary incentives that have been used by the federal government to bring about change in curriculum, new media, and improvement of teaching at all levels. He cites the National Defense Education Act of 1958 as a striking example of this external force. He points out that it is evident that statutes, incentives and grants can be powerful forces to produce an innovation even when certain otherwise significant factors are not present.

Clark and Guba (1965) maintain that the Elementary-Secondary Education Act of 1965 is making serious inroads into the process of educational change through the establishment of regional educational laboratories, the revitalization of state education agencies and the establishment of local demonstration centers throughout the country.

Planned change. One of the elements leading to successful innovation is astute planning. Hansen (1967) suggests the necessity for thoughtful and careful planning on the part of those responsible for this activity. Changes that just happen are not likely to be particularly useful or effective; they may actually be harmful to the organization. He goes on to say that although changes have to be brought about often by outside forces, the most desirable change and the most effective change remains that which is self generated within the organization or by the people involved. He emphasizes that change readiness, like reading readiness, is not something that one just waits for; it has to be encouraged and prodded into being. Therefore, even in planning for change there must also be planning for how to bring about or implement change.

Bhola (1965) asserts that:

> . . . planned change or planning of change or systematic application of research to classroom practice in American education is unavoidable. It can only be postponed. The price of postponement will be high and dear to pay. It won't be worth it.

Orlich (1967) stressed the essence of educational change is planning--not taking chances on spontaneous mutations.

Perhaps the most serious deterrant for adequate planning for innovation is the absence of any assigned responsibility for long range planning at the local district level. School districts seldom have any organizational mechanisms for forecasting from which to provide a sound base for preparation for future developments. This need is recognized by Carlson (1965) whose studies indicate that the problem of establishing a vital change advocacy function among the many levels in our system of education is one of extreme importance and one for which we should recruit our best minds. He suggests that where change agents are not possible or feasible the administrator needs, among other things, a kit of tools to assist him in understanding the phenomenon of change and to permit him to create, accelerate or control change in his school organization. According to Cunningham (1962) school administrators performing as internal change agents must know their school organization and act upon the basis of their insights into the environments which they are called upon to operate.

The need to plan for organizational change is supported by Lazarsfeld as cited in Griffiths (1966). Lazarsfeld states that:

> The administrator must try to build into his organization provisions for innovations, for change, and for development . . . the conditions for change must be incorporated into the organization so that there may be a steady process of development rather than a series of disrupting innovations.
>
> Some of the most recent studies relating to organizational theory are those evaluating aspects of organizational climate and its impact upon the workers.

Miles (1965) argues that any planned change effort is deeply conditioned by the state of the system in which it takes place and that the successful efforts at change must take as a primary target the improvement of organizational health. He describes organizational health as the school system's ability not only to function effectively but to develop and grow into a more fully functioning system. He uses an image from Gestalt psychology when he points out that most change attempts have typically been in "figure" occupying the focus of attention, while the organization itself has remained "ground." Bhola (1965), Argyris (1965) and Miles (1965) hypothesize healthy organizations to be open systems which make them more susceptible to change in adoption of innovation.

The Huron (Halley, 1966) studies suggest that innovations can take place easily within a healthy organization, and concludes that these are open systems which are accustomed to change as an adaptive response to recognition of individual needs. Howsom (1967) supports the belief that any healthy organization can manage adaptation and change. Miles (1965) has done considerable research on the question of organizational health. In his paper he emphasized:

> Thus in a school or college I believe the state of something loosely termed organizational health can tell us more than anything else about the probable success of any particular effort. Even more, the schools systems capacity to go beyond and essentially passive adapting of the latest educational fashion to an active, problem solving, self-developing, innovation-inventive stance is very crucially a matter of organizational health.

Associated with the studies in organizational health are the findings on organizational climate. Some of the most recent studies relating to organizational theory are those evaluating aspects of organizational climate and its impact upon the workers. Halpin and Croft (1963) completed a study at the University of Chicago relative to organizational climate of schools. They developed an instrument entitled "Organizational Climate Description Questionnaire" (O.C.D.Q.) which purports to measure the behavior characteristics of the teacher and principal within an organization.

As a result of the studies in Organizational Climate, Halpin and Croft (1963) were able to discriminate six profiles of Organizational Climate. The social interactions which characterized these six climates were ranked from open climate to closed climate. Their open climate describes an energetic, lively organization which is moving toward its goals. The closed climate describes an organization which is not moving and is characterized by a high degree of apathy on the part of all members of the organization.

The O.C.D.Q. has been used in several studies in which the subtest scores have been correlated with independent measures of the personality and the personal value patterns of the school principal. In reporting these studies, Halpin (1966-a) indicates that they have found significant relationships which are meaningful and possess practical value.

A report by Halpin and Croft (1963) made by the Midwest Administration Center maintains that the Organizational Climate can be construed as the organizational personality of a school. They put it this way:

> . . . figuratively, "personality" is to the individual what "climate" is to the organization.

Personality and behavior characteristics of personnel. Several studies, originating in the Department of Educational Administration at Utah State University, have investigated the identification of personality factors of educators and their relationship to educational innovations. Bos (1966) explored the patterns of expectations for the role of personality of the change agent. His investigation revealed that within the sixteen factors used, there is general agreement among educators as to the importance of personality characteristics expected of the change agent. A recent project by Johnson, Carnie and Lawrence (1967), as part of a United States Office research grant, studied personality characteristics of school superintendents in relation to their willingness to accept innovation in education. Subjects for the study were 93 Idaho superintendents and 71 school superintendents from across the United States with known interest and involvement in educational innovation. They found:

> . . . a significant correlation between personality characteristics of superintendents and their willingness to accept and implement change in education.

A similar study by Hinman (1966) at Utah State University found a relationship between personality characteristics of principals and their implementation of innovation.

Halpin (1966) developed the Leadership Behavior Description Questionnaire which chose two specific dimensions of leader behavior:

initiating structure and consideration. Initiating structure refers to the leader's behavior in delineating the relationship between himself and members of the work-group and in endeavoring to establish well defined patterns of organization, channels of communication and methods of procedure. Consideration refers to behavior indicative of friendship, mutual trust, respect and warmth in the relationship between the leader and the members of his staff. Bell (1966), by using the L.B.D.Q., investigated the relationship between superintendents leadership behavior, personality and the extent of adoption of educational innovation. He found differences between the personality characteristics of superintendents and their leadership behavior.

A study conducted by the University of Wisconsin (Eye, 1966) concluded that in curricular planning and implementation it appears that consideration is a relatively more valuable behavior for the superintendent to exhibit than is initiating structure behavior.

The behavior of leaders varies widely from one leadership situation to another. Sanford (1942) has aptly summarized the situation:

> . . . in a specific situation, leaders do have traits which set them apart from followers, but what traits set what leaders apart from what followers will vary from situation to situation.

In this connection, Hemphill (1949) in an elaborate and careful study of approximately five hundred assorted groups has demonstrated empirically that variance in leader behavior is significantly associated with the situational variance. Regardless of how administrators behave, there is very little doubt that this behavior has a pointed effect on the climate for change which is existant in a school system.

McPhee (1967) maintains the climate for change is essentially set by the superintendent. The superintendent has the responsibility to set the tone for change. His behavior speaks loudly and reveals whether or not he truly seeks improvement. The importance of the superintendent in the schools involvement in innovation is clearly derived from the power--real or perceived--of his position according to McPhee. The power to allocate resources in terms of people, money, or time, carries with it the ability to encourage or stifle improvements.

Others believe that the behavior of the principal is the motivating force which creates a climate for change. The essence of the conclusion of Brickell (1961) in his study of change in the state of New York was that principals are the key figure in the process o creating a school climate that nurtures or discourages change.

For example, according to Halpin (1966), the behavior of the principal in a closed climate school fails to foster and encoura es a climate where teachers are permitted to experiment, to initiate new approaches to teaching or learning, and where congruency in philosophy and teaching activities is sought and/or demanded by he principal. The principal requires teachers to see or do things as he perceives they should be done. He is heavily task oriented and expects teachers to perform according to closely defined curriculum patterns, teaching techniques and set rules and regulations.

The Michigan Cooperative Project in Educational Development as reported by Glines (1966) found that an indirect role of the principal is the development of a climate that encourages the entire staff to support innovation. According to Halpin and Croft (196), the principal of an open climate school showed a high level of thrust. He set an example by working hard himself. He established policies and relationships which facilitated the teachers accomplishment of their tasks and provided job satisfaction. Teachers produced easily and freely under his leadership and the school enjoyed an extremely high level of esprit.

Glines (1966) reports:

> That as one visits the new and exciting schools in America . . . one cannot help but be convinced that the schools which are moving forward are the schools piloted by innovative principals.

The classroom teacher seldom plays a major role in the process of innovation according to McPhee (1967). In most cases the influence of a given teacher does not range far beyond his classroom. The teacher may influence school climate but far less than the administrator.

Other related factors which may influence change. Other studies have explored related factors which influence innovation and change.

Robert Fox (1965), in making a report for the Michigan Cooperative Project in Educational Development, found a significant correlation between the amount of staff inventiveness and the staff's perception of the principal's support for innovative teaching. The author further related that findings indicate that an indirect role of the principal is the development of a climate that encourages the entire staff to support innovation.

There is a new breed of school administrators appearing on the educational scene. They function more in the role of the change agent, innovator and advocate. They are seeking promising new opportunities and the challenge of exciting educational developments.

The best description of this new type is made by Rogers (1965):

> Innovators are venturesome individuals . . . They are generally young . . . They are cosmopolite, even breaking considerable geographical distance barriers to form groups . . . They spread new ideas as their gospel . . . They are likely to be viewed as deviants by their peers . . . They are in step with a different drummer than their peers . . . They march to different music.

Innovators are "generally young" according to Rogers (1965), however, Carnie (1966) and Lawrence (1967) found no association between age and the degree of innovativeness. Hinman (1966) found age not to be significantly related to the principal's implementation of innovation.

The number of years the professional staff remains in a system may very well influence innovation. It might be assumed that a rapid and consistent turnover of teaching personnel would inhibit a school's involvement in innovation. Ross (1958) reports that the best results in change efforts occur when at least two-thirds of the staff members remain in the system for eight to thirty years.

The schools involvement in innovation and the number of years the school administrator remains in the system has been explored by a number of studies. Hinman (1966) and Carnie (1966) found no association between the mean number of years in the school system of the principal or superintendent and the school's involvement in innovation.

A problem closely related to tenure is that of school size and adoption of innovation. Carnie (1966) and Lawrence (1967) found a relationship existed between the larger schools participating in their study and the involvement in the implementation of educational innovations. The larger school is not always involved in innovative practices, however. Other studies using socio-economic level, climate and school size found conflicting results. Nichols (1966) and his colleagues, as reported by Halpin (1966-a), compared two schools from a similar low socio-economic level: one school had an open climate, the other a closed climate. The open climate school was half the size of the closed climate school. They concluded that in the smaller open climate school the principal was able to initiate more varied activities and innovations than was possible in the larger closed climate school. He was able to devote time to drawing parents into involvement in school affairs, and encouraging livelier interaction patterns with staff, outside agencies, auxiliary services, and the community.

Halpin (1966-a) reported that the large urban-core schools reveal a preponderant number of these schools are marked with closed climates. He implied that to associate change with largeness is inaccurate. There are problems of low socio-economic status and racial mix or unmix which often account for lack of innovativeness in larger schools.

Irregardless of school size or the qualifications of the professional staff, the burden of the routine housekeeping responsibilities, and large class loads exists for teachers and administrators in many educational organizations. These heavy responsibilities provide little time for planning and developing innovative practices. An interesting study which points up the problem was conducted by Simon (1962) indicating that "Gresham's Law" operated in most organizations whereby the routine squeezes out the innovative and inventive.

The routine activities that go on daily in an organization are the result of decisions made by someone in a position of authority or responsibility to do so. This decision-making process takes place in most organizations even though the point of decision-making may be different. The point of decision-making is simply where the decision is made. A decision may be reached by the administrator, the staff or by some other person or combination of persons. The process and the point of decision-making may very well have implications for a school desiring to bring about change.

There is very little research in the area of the decision-making process and the organizations involvement in innovation. One significant study was done by the University of Wisconsin (Eye, 1966) relative to production and implementation of curricular plans. This research proposed to measure the relationships between the extent of congruence in staff perception of decision-point and the implementation of curricular plans. It was found:

> . . . that the manipulative efforts to increase congruence was accompanied by measurable increases in both the productivity and implementation of curricular plans.

Statement of the Problem

The knowledge explosion and technological discoveries are accompanied by many changes in our society. If education is to assist in the progress of society rather than inhibit it, educators must become actively engaged in change efforts directed toward themselves, toward their material, toward their social and educational environments. The public schools and higher institutions must develop strategies for planning, initiating and coping with change. The educational enterprise must more clearly define what factors influence and cause change to occur in a school organization.

The problem now is to determine those factors which inhibit or cause change to occur in a school system.

The Purpose of the Study

The purpose of this study was threefold. The first was to determine whether there were significant differences between the organizational climate for the most innovative and least innovative schools participating in the study. Closely related to the first purpose was to determine if a difference exists between expenditures per student for the most innovative and least innovative schools; between the age of the professional staff for the most and least innovative schools; between the years the professional staff member served in the school for the two innovative categories, and between the size of the professional staff for the two categories of innovation.

The second purpose was to determine if a difference exists between the teacher and administrator perception of school climate for the most innovative schools and the least innovative schools

The third purpose was to determine if a difference exists between expenditures per student for the open and closed climate schools. The study will determine if a difference exists between each of the four variables of innovation, age, size of staff, and years in the school for the two climate categories.

CHAPTER II

METHOD OF THE STUDY

Hypotheses:

Current studies suggest possible significant differences may exist between innovative practices of schools and other selected variables. Therefore, this study will test the following null hypotheses:

1. There is no significant difference between the level of organizational climate as measured by the O.C.D.Q. for the most innovative and least innovative schools.
2. There is no significant difference between the expenditure per student in average daily attendance for the most innovative and least innovative schools.
3. There is no significant difference between the age of the professional staff for the most innovative and the least innovative schools.
4. There is no significant difference between the years of service of the professional staff in a school for the most innovative and least innovative schools.
5. There is no significant difference between the number of professional staff (size) in the school for the most innovative and least innovative schools.
6. There is no significant difference in teacher perception and administrator perception of the school climate in the most innovative schools.

7. There is no significant difference in teacher perception and administrator perception of the school climate in the least innovative schools,
8. There is no significant difference between the expenditures per student in average daily attendance for the open climate schools and closed climate schools.
9. There is no significant difference between innovation scores as measured by the Educational Innovation Checklist for open climate schools and closed climate schools.
10. There is no significant difference between the age of the professional staff for the open climate schools and closed climate schools.
11. There is no significant difference between the years of service in a school of professional staff for the open climate schools and closed climate schools.
12. There is no significant difference between the number of professional staff for the open climate schools and closed climate schools.

Subjects of the Study:

The State Department of Education personnel in the five states of Oregon, Washington, Idaho, Nevada and Utah assisted with the first phase of identifying the schools they perceived as being the most innovative and least innovative. Eighty-six schools were so identified.

The Checklist of Educational Innovation as developed by Hinman (1966) and used to identify potential innovation in her research was utilized for that purpose by this study. The Checklist was mailed to the principals of the eighty-six schools.

The study was explained to each principal and an invitation extended to him to participate. Of the eighty-six principals, seventy agreed to participate and returned the completed Checklist. The raw scores for innovation were computed from the information provided on the Checklist. The sixteen schools with the highest innovation scores and sixteen schools with the lowest innovation scores were selected to participate in the second phase of the study. The extra school in each category was included in the event one failed to respond. Table 1 indicates the schools which actually participated in the second phase of the study listed according to state and innovation category.

Table 1. Participating schools listed by state and according to innovative category

Innovation category	Oregon	Washington	Idaho	Nevada	Utah	Total
Most innovative	3	3	2	4	3	15
Least Innovative	1	1	8	2	3	15
Total	4	4	10	6	6	30

Of the thirty schools selected there were fourteen high schools, six junior high schools, eight elementary schools and one classified as operating grades one through twelve.

The second phase of the study was the administration of the Organizational Climate Description Questionnaire to the teachers and administrators of the thirty schools. This was done primarily by a staff member of the participating school selected on the basis of his rapport with his colleagues and his leadership ability. The investigator made contact by telephone with the administrator of the school prior to the personal visit to provide further clarification of the purposes of the study, establish dates, discuss procedures and receive suggestions for a person to administer the Questionnaire. At the time the school was visited the person selected to administer the Organizational Climate Description Questionnaire was contacted and oriented on the procedures. The information about the Questionnaire and the instructions for respondents to follow was recorded on a magnetic tape to provide more uniformity in administration. All but four schools received a personal visit. Schools not visited were contacted by telephone, the person selected and orientation completed by this method. The research instruments and recorded tape of instructions were sent by mail. These schools were small in size (96 respondents) and returns of the completed Questionnaire was high (91%).

School visitations started April 5, 1967, and were completed May 14, 1967. There were 1,058 professional staff members in the thirty schools. Of this number, 890 responded by completing the Questionnaire. Table 2 shows the number responding and the percent of returns. The table was organized according to the two categories of innovation. Eighty-four percent of the available staff members responded by completing the Questionnaire.

Table 2. Participating professional staff listed according to state and innovation category

	Most innovative			Least innovative			Total		
	Selected	Responded	%	Selected	Responded	%	Selected	Responded	%
Oregon	186	162	87	17	15	88	203	177	87
Wash.	146	100	68	37	29	78	183	129	70
Idaho	28	28	100	151	123	81	179	151	84
Nevada	223	189	84	38	33	86	261	222	85
Utah	153	139	90	79	72	91	232	233	91
Total	736	618	84	322	272	84	1058	890	84

Instrumentation:

The instruments selected for gathering data included the Innovational Checklist, Organizational Climate Description Questionnaire, financial information, guidelines and biographical data form.

The Innovative Measuring Instrument

The Innovational Checklist was developed by Hinman (1966) as part of her dissertation at Utah State University (Appendix A). She followed the pattern established by Brickell (1961) in surveying innovative practices in the schools in New York State and compiled an inventory of innovations which had been implemented in the Clark County School District (Las Vegas, Nevada) between September 1, 1962, and December 31, 1965. These innovations were categorized according to six structural elements of schools, namely: scheduling (time), staff utilization (teachers), procedure (methods), organization (students), curriculum (subjects), and facilities (places).

Hinman (1966) developed the Checklist for secondary and elementary schools. The basic structural elements are the same but modification of items in each of the structural elements was necessary to describe the differences in elementary and secondary practices. She reports items were limited to those structural elements over which the principal had the authority to precipitate a decision.

Principals of the thirty schools participating in this study were asked to complete the Checklist applicable to his level of administration and indicate those innovations which had been implemented in his school during the period of September 1, 1962, to January 1, 1967. Also, he was requested to add any additional innovations not shown on the Checklist but which were operating in his school.

The scoring was based on the degree of involvement of students in numbers and time. A score of 0 was given to each item in which the school had no involvement. Less than 25% involvement received a rating of 1; 25% to 75% was rated 2; and more than 75% involvement in innovative practices was rated 3.

The Organizational Climate Description Questionnaire

The O.C.D.Q. was the instrument selected to collect information relative to the organizational climate of a school and was developed by Halpin & Croft (1963) at the University of Chicago. The major purpose of their study was to describe the Organizational Climate of schools as perceived by the respective respondents.

Halpin (1963) reports a set of simple statements were prepared and asked respondents to indicate to what extent each statement characterized their school. The following items illustrate the kind of statements used (see Appendix C):

1. The principal insures that the teachers work to their full capacity.
2. The principal is in the building before the teachers arrive.
3. The principal helps teachers solve personal problems.
4. Teachers ask nonsensical questions in faculty meetings.

The scale against which the respondent indicated the extent to which each statement characterized his school was described by four categories:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Halpin (1966) reports the scale is marked according to frequency of occurrence. The essential question is simply:

> How true is this of your school?" And this, indeed, is how the teachers and the principals respond to the items . . . When, for example, a faculty describes the Organizational Climate of its school as Open, the question "Is it really open?" is unanswerable and irrelevant. The climate is open if the faculty perceives it as open.

Halpin and Croft constructed the Organizational Climate Description Questionnaire by beginning with 1,000 items. These were screened by actually testing three preliminary forms of the O.C.D.Q. The major analysis was done with data on Form III, secured from 1,151 respondents in a total of 71 schools. Form III contained eighty items and the analysis showed it could be reduced to sixty-four items. Form IV, the final version, is used in this study and includes sixty-nine items. The author of the Organizational Climate Description Questionnaire added five buffer items merely to fill out the space on the IBM cards.

The sixty-four items were each grouped into eight subtests. Items which composed these eight corresponding subtests are listed in Appendix D.

The first four subtests refer primarily to the behavior of the teachers. Halpin and Croft (1963) identified them as:

1. Disengagement which referred to the teacher's tendency to be "not with it." This dimension describes a group which is "going through the motions", a group that is "not in gear" with respect to the task at hand. . . .

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands and other requirements which the teachers construe as unnecessary "busywork." The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social needs satisfaction which is not necessarily associated with task accomplishment.

The second four dimensions refer to the behavior of the principal. These four subtests were described as follows:

5. Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He . . . prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation. . . .

6. Production emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and plays the role of "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

> 7. Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through example which he personally sets. . . . his behavior, though starkly task-oriented, is nonetheless viewed favorably by the teachers.
>
> 8. Consideration refers to behavior by the principal which is characterized by an inclination to treat teachers "humanly", to try to do a little something extra for them in human terms.

Halpin (1966) reported the eight dimensions of Organizational Climate were identified by factor analysis. He summarized the procedures as follows:

> . . . in the item analysis we had concentrated upon independence and specificity, while the subtest analysis we had sought to identify the most dependable, higher-order abstractions which could be delineated within the total set of subtests - in spite of such independence as did obtain among them.

In the process of selecting the Organizational Climate Description Questionnaire for use in this study, it was found that no specific instructions were available for obtaining a school mean score for identifying openness and closedness. Halpin and Crofts' original study established prototypic profiles for six organizational climates ranked from openness (autonomous, controlled, familiar, paternal) to closedness. This research required a school mean score in order to identify open and closed climates.

In a telephone conversation with Don Croft, he indicated the O.C.D.Q. mean score for a school was computed by adding the scores on sub-test #3 (esprit) to #7 (thrust) and subtract the mean score of sub-test #1 (disengagement). The highest resulting scores represented the open climate schools and the lowest scores the schools with closed climates.

Halpin (1966-a) reports that the O.C.D.Q. has been used in not less than 1,100 schools in the United States and Canada. It had been used in Korea, Pakistan, and Australia.

A study by Andrew (1965) and Brown (1965) as reported by Halpin (1966-a) stated that the eight subtest scores are good measures of the concepts they purport to measure and the pattern of intercorrelations among the subtest scores was, in general, similar to that found in the original study.

Biographical Data

Biographical data was obtained from each respondent in the participating schools at the time of administering the Organizational Climate Description Questionnaire. The respondent's age was recorded by checking a number from 1-5 opposite the appropriate interval on a frequency distribution as follows.

Age: 20-29 1._____

30-39 2._____

40-49 3._____

50-59 4._____

60 or over 5._____

The procedure for collecting the data on years of experience at the school was also obtained by a frequency distribution but with five years as the interval.

Finance Information

Due to the variation in the financial accounting systems among the five states it was necessary to define the expenditures to be included in the costs per student in average daily attendance. This expenditure guideline is a part of Appendix B.

The administrator of each school was requested to provide the 1965-66 expenditures per student in average daily attendance for his school. A graduated scale with a range of less than $199.00 to more than $650.00 was provided for the principal to check the interval which best represented his expenditure level. The score had intervals of $49.00. Also, the principal was to insert the actual dollar amount expended for the 1965-66 school year computed on the basis of the expenditure guideline.

Risk funds were defined for use in this study as:

> those funds made available through foundations or special appropriations provided from local, state or federal sources which were over and above the usual amounts available to your school. The risk funds are monies which may be used for a variety of different or innovative purposes without the usual restrictions. The staff and/or administrator would have almost unrestricted flexibility in use of these funds even though they would need to be accounted for through the usual audit and accounting procedures.

Each school was requested to determine the total amount of such funds over a four year period beginning with 1963-64 to 1966-67. The expenditure of risk funds per Average Daily Attendance for each year was then computed by dividing the total risk funds by the schools' Average Daily Attendance for each school year.

Method of Analysis:

To test the differences proposed by each of the twelve hypotheses an analysis of variance technique was used and an F ratio computed with a minimum of .05 level of significance.

The analysis of variance is a technique used for testing for differences among two or more means.

CHAPTER III

ANALYSIS OF DATA

Descriptive Data:

The data for this study were gathered from 890 respondents from thirty schools in five states. The schools were selected on the basis of their implementation of educational innovations. The study deliberately established a dichotomy by selecting the fifteen most innovative and fifteen least innovative schools. Table 3 shows the innovation score for each school by state. The scores of schools on the table were scattered, indicating a fairly equal distribution of schools over the five states. The major exception was Idaho with eight schools falling in the lower innovative scores.

Table 3. Frequency distribution of innovation scores by state

Scores	Oregon	Washington	Idaho	Nevada	Utah	Total
70-75				/		1
65-59						0
60-64					/	1
55-59	/		/	/		3
50-54	/			/		2
45-49	/					1
40-44		///	/	/		5
35-39					/	1
30-34					/	1
25-29						0
20-24						0
15-19						0
10-14	/	/	/	/	//	6
5-9			//////	/	/	8
0-4			/			1
Total	4	4	10	6	6	30

The point of dichotomy between the more innovative and the least innovative schools was established by determining the raw score for all schools by using the Checklist of Educational Innovation. A frequency distribution as shown in Table 4 represents the number of principals and their score on the Checklist. The overall range of scores was 3 to 71. Hinman's (1966) study had a somewhat similar range of 4 to 62.

There was an 18 point "gap" in scores between the most innovative and least innovative schools. The range in scores for the most innovative was 31 to 71 or 40 point spread while the least innovative showed a spread of 10 points: 3 to 13.

Table 4 Frequency distribution of innovation scores according to response of the school principal

Scores	Number	Scores	Number
69-71	/	25-27	
66-68		22-24	
63-65		19-21	
60-62	//	16-18	
56-59	//	13-15	//
53-55		10-12	////
50-52	//	7-9	////
47-49	/	4-6	////
44-46		1-3	/
40-43	/////		
37-39			
34-36	/		
31-33	/		
28-30			
Total	15		15

To further validate the two innovative groupings the "structural category" mean scores were tabulated and compared as shown in Table 5. Schools which scored high for the total Checklist also scored higher in each category.

Following the selection of the schools according to their innovational practices the O.C.D.Q. was administered to over 900 teachers and administrators in the thirty schools. As was previously noted, a personal visit was made by the investigator to twenty-six of the thirty schools. The response of the teachers and administrators of the participating schools showed an 84% return with 890 questionnaires fully completed which could be placed on punch cards by the Computer Center at Utah State University.

After the 890 responses had been placed on IBM punch cards, the Computer Center grouped each item according to the eight dimensions of organizational climate (see Appendix F). A mean score for each of the eight dimensions or subtests was then computed for each school.

By using Crofts procedure, as previously noted, the O.C.D.Q. mean scores were computed for each school. The mean scores were converted to standard scores by using the arbitrary mean of fifty.

This procedure resulted in a standard mean score for each of the thirty schools. The frequency distribution as shown in Table 6 represents these mean scores grouped according to innovation category.

It is interesting to note the close grouping of the O.C.D.Q. scores for the least innovative schools and the "scattering" effect for the most innovative schools. The highest O.C.D.Q. scores were

Table 5. Raw innovative scores according to structural category for secondary and elementary schools

Structural Category	Secondary			Elementary		
		Most Innovative	Least Innovative		Most Innovative	Least Innovative
Scheduling	tsc	51	6	tsc	19	12
	N	11	9	N	4	6
	M	4.6	.66	M	4.8	2.0
Staff	tsc	95		tsc	30	4
	N	11	9	N	4	6
	M	8.6	1.1	M	7.5	.66
Procedures	tsc	89	6	tsc	19	8
	N	11	9	N	4	6
	M	8.0	.66	M	4.8	1.3
Organization	tsc	74	2	tsc	33	0
	N	11	9	N	4	6
	M	6.7	.22	M	8.2	0
Curriculum	tsc	103	45	tsc	27	22
	N	11	9	N	4	6
	M	9.4	5.0	M	6.8	3.7
Facilities	tsc	116	3	tsc	54	7
	N	11	9	N	4	6
	M	10.5	.33	M	13.5	1.2
		${}^{t}M = 48.00$	${}^{t}M = 8.00$		${}^{t}M = 45.50$	${}^{t}M = 8.8$

Grand Total Mean Score: 27.83 Hinman (1966) Grand ${}^{t}M$: 23.59

also the most innovative group with only two exceptions: Schools 14 and 15 listed in interval 36-40.

All least innovative schools showed the lowest O.C.D.Q. scores with the exception of school 18 in the 56-60 interval.

Table 6. Frequency distribution of O,C.D.Q. scores grouped according to innovation category

Most Innovative		Least Innovative	
Scores	Number	Scores	Number
76-80	/	56-60	/
71-75	////	51-55	
66-70		46-50	
61-65	/	41-45	
56-60	/	36-40	//////////
51-55	////	31-35	////
46-45	//	26-30	
41-45		21-25	
36-40	//	16-20	
Total	15	Total	15

Figure 1 provides a more vivid picture of these differences.

The range of climate scores for the most innovative category was 36-77 or a 41 point spread. The least innovative group had a range of 33-60 or a 27 point spread. If school #18 was removed from the scores for the least innovative category, the spread would be reduced to six points. Conversely, by following a similar procedure and removing schools 14 and 15 for the most innovative group, the spread would be eighteen points instead of twenty-seven.

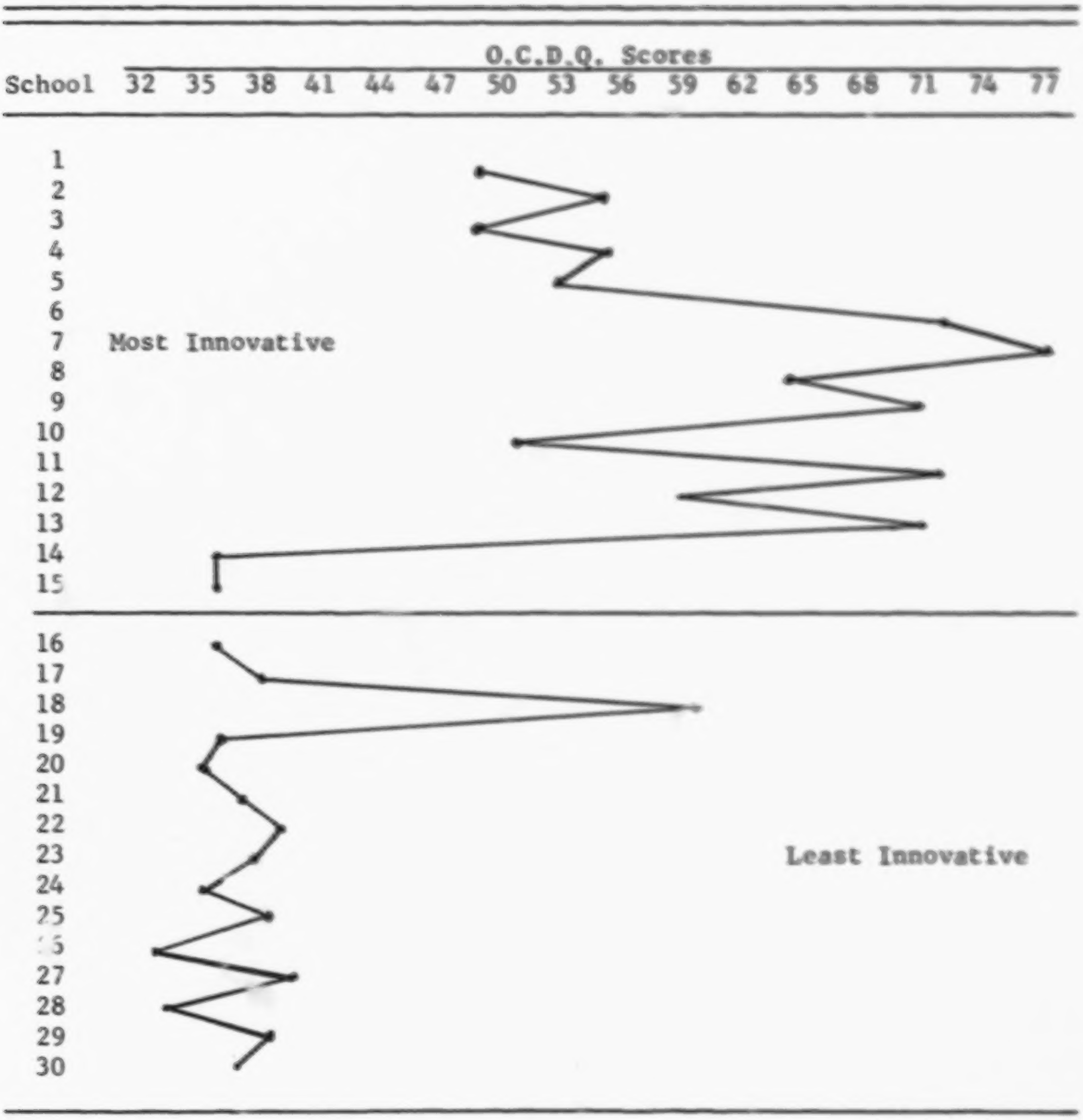

Figure 1. A comparison of O.C.D.Q. mean scores grouped according to innovation category

Using the mean scores derived from the O.C.D.Q. the participating schools were grouped in Table 7 according to open climate and closed climate schools, the highest scores being open climate and lowest scores being closed climate.

Thirteen innovative schools and one least innovative school (#18) were represented in the open climate category. Fourteen least innovative schools and two schools (#14 and 15) in the most innovative category were grouped into the closed climate.

Table 7. O.C.D.Q. scores grouped according to open and closed climate

Open Climate		Closed Climate	
School Number	O.C.D.Q. Score	School Number	O.C.D.Q. Score
1	49	14	36
2	55	15	36
3	49	16	36
4	55	17	38
5	53	19	36
6	72	20	35
7	77	21	37
8	64	22	39
9	71	23	37
10	51	24	35
11	72	25	37
12	59	26	33
13	71	27	38
18	60	28	34
		29	37
		30	36

The fourteen open climate schools showed a range of 49-70 or a 31 point spread in climate scores. There was only a six point spread (33-39) for the sixteen closed climate schools.

Halpin and Croft (1963) developed a description of the behavior characteristics of teachers and administrators in schools with open and closed climates. The complete description is in Appendix E. According to their description, a school with an open climate is characterized by teachers who work well together and morale is high. The principal sets a good example for the teachers; his actions are genuine and authentic; rules and procedures are flexible and he clearly provides leadership for the staff. Summarized, open climate schools may be classified as follows:

Teacher Behavior	Leader Behavior
+ Esprit	+ Thrust
- Disengagement	+ Consideration
- Hindrance	- Aloofness
0 Intimacy	- Production Emphasis

(+ = high; - = low; 0 = neutral)

Further, they describe the closed climate school as one where the group obtains little satisfaction from their task achievement or social needs. Teachers often bicker and morale is generally low Housekeeping duties, reports and busy work hinder teachers from satisfactory task achievement. The principal is primarily concerned about task accomplishment and gives little concern to the personal and social needs of the staff. Teachers view the principal as "not genuine." He urges greater effort but fails to provide the initiative or freedom for the group to act. These schools may be classified as follows:

Teacher Behavior	Leader Behavior
- Esprit	- Thrust
+ Disengagement	- Consideration
+ Hindrance	+ Aloofness
0 Intimacy	+ Production Emphasis

(- = low; + = high; 0 = neutral)

The school principal of all participating schools reported the amount of funds expended per student in A.D.A. for the 1965-66 school year. Table 8 reports the funds expended per student and the groupings according to innovation category.

Table 8. Frequency distribution of expentitures per student in average daily attendance according to innovation category - 1965-66

Expenditure per Student in A.D.A.	Most Innovative	Least Innovative
650 or more	////	/
600-649	/	/
550-599	/	//
500-549	///	/
450-499	//	/
400-449	//	///
350-399	//	///
300-349		///
250-299		
200-299		
199 or less		
Total	15	15

Risk funds are defined as available income from foundations or local, state and federal agencies, appropriations or grants which were over and above the "usual" amounts available to a school.

Information on risk funds was collected on the basis of an expenditure interval as follows:

Expended per A.D.A.	1966-67	1965-66	1964-65	1963-64
None	1.______	1.______	1.______	1.______
$ 1 - $ 49	2.______	2.______	2.______	2.______
50 - 99	3.______	3.______	3.______	3.______
100 - 149	4.______	4.______	4.______	4.______
150 - 199	5.______	5.______	5.______	5.______
200 - 249	6.______	6.______	6.______	6.______
250 - 299	7.______	7.______	7.______	7.______
300 or more	8.______	8.______	8.______	8.______

The principal was requested to check the appropriate blanks indicating the amount expended per student in average daily attendance per year over a four year period.

Table 9 is a numerical index representation of risk funds expended per student in A.D.A. over a four year period by the participating schools. The number 1 indicates no funds were spent. Number 2 represents an expenditure of from $1 - $50. Each larger number represents an additional expenditure of up to $50.00 per student in A.D.A.

Tha analysis of variance technique was not used in reporting this data. However, it is important to note that all but two schools in the most innovative category experienced risk funds for one year or more. The least innovative group had only one school which indicated risk funds and this was for only one year.

Table 9. Numerical index representations of risk funds expended pr
A.D.A. over a four year period by participating schools

	School No.	1966-67	1965-66	1964-65	196-64
Most Innovative	1	3	2	1	
	2	2	2	1	
	3	2	2	1	
	4	2	2	2	
	5	8	2	2	
	6	3	2	2	
	7	1	1	1	
	8	2	2	2	
	9	4	1	1	
	10	2	2	1	
	11	2	2	2	
	12	1	1	1	
	13	2	2	1	
	14	2	2	2	
	15	4	1	1	
Least Innovative	16	1	1	1	
	17	1	1	1	
	18	1	1	1	
	19	1	1	1	
	20	1	1	1	
	21	1	1	1	
	22	1	1	1	
	23	1	1	1	
	24	1	1	1	
	25	1	1	1	
	26	2	1	1	
	27	1	1	1	
	28	1	1	1	
	29	1	1	1	
	30	1	1	1	

Testing of Hypothesis and Analysis of Data

Hypothesis No. 1: Climate and Innovation

"There is no significant difference between the level of organizational climate as measured by the O.C.D.Q. for the most innovative and least innovative schools."

The data indicate an O.C.D.Q. mean score of 58 for the most innovative category and 37.87 for the least innovative. The results of the analysis as shown in Table 10 reveal an F ratio of 32.483. This difference among the two means is significant at the .001 level. A minimum F ratio of 4.20 was required to show significance at the .05 level.

The null hypothesis is therefore rejected and it may be concluded that there is a difference between the climate of a school and the level of involvement in innovation in education.

The analysis of the data related to this hypothesis indicated that schools which are involved in innovational practices are generally the open climate schools. The exceptions are schools 14 and 15 with low climate scores which placed them in the closed climate category.

Further, the analysis of data indicated that schools which are not as involved in the implementation of innovation showed the lowest O.C.D.Q. scores and, therefore, are classified as closed climates. The one exception is school 18 in the least innovative category which had a score of 60.

In summary, the data indicated that high climate scores or open climate promote innovative practices. Conversely, a lower climate score or closed climate seems to inhibit innovation.

Where the two innovative schools showed low O.C.D.Q. scores, it may be hypothesized that other variables may have influenced the

Table 10. A comparison of the O.C.D.Q. mean scores between most innovative and least innovative schools

Most Innovative		Least Innovative	
School	O.C.D.Q. Scores	School	O.C.D.Q. Scores
1	49	16	36
2	55	17	38
3	49	18	60
4	55	19	36
5	53	20	35
6	72	21	37
7	77	22	39
8	64	23	37
9	71	24	35
10	51	25	37
11	72	26	33
12	59	27	38
13	71	28	34
14	36	29	37
15	36	30	36

M = 58.00

M = 37.87

F Ratio = 32.483

df = 1/28

* Alpha = .05

R: F ≥ 4.20

** Alpha = .01

R; F ≥ 7.65

*** Alpha = .001

R; F ≥ 13.50

adoption of innovational practices. A similar hypothesis may be fo warded for the school which showed low innovation scores and high climate scores.

Hypothesis No. 2: Innovation and Expenditures per Student in .D.A.

"There is no significant difference between the expenditures er student in average daily attendance for the most innovative and le st innovative schools."

Table 11 reveals an average of $549.27 expended per student i the most innovative schools and $455.20 per student in the least innov tive, or a difference of $94.07 per student. The computed F ratio is 4. 26 which is significant at the .05 level.

The null hypothesis is therefore rejected and it may be concl ded that there is a difference between the expenditure per student for the most innovative and least innovative schools with the higher expen iture schools involved in more innovational practices.

The analysis of the data related to this hypothesis showed a mall difference of .326 existed between the computed F ratio and the mi imum of 4.20 required for rejection. This close margin may give some c ncern for using the results as a strong predictor regarding the inf uence of expenditures upon innovation. Nevertheless, the rejection of t is null hypothesis would seem to indicate that higher expenditures pe student for maintenance and operation is one area of concern for t ose who desire changes to take place in the educational organization.

Table 11. Comparison of the average expenditures per student in A.D.A. grouped according to innovation category

Most Innovative		Least Innovative	
School	Funds Expended	School	Funds Expended
1	$546	16	$335
2	457	17	469
3	497	18	439
4	625	19	610
5	675	20	340
6	660	21	524
7	590	22	445
8	673	23	404
9	387	24	360
10	524	25	325
11	358	26	680
12	845	27	557
13	410	28	390
14	548	29	563
15	444	30	387
	M = $549.27		M = $455.20

F Ratio = 4.526* df = 1/28

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: F ≥ 4.20 R: F ≥ 7.65 R: F ≥ 13.50

Hypothesis No. 3: Age of Professional Staff and Innovation

"There is no significant difference between the age of the professional staff for the most innovative and the least innovative schools."

The information on the age of the professional staff was collected by a numerical index as described earlier in this chapter. The lower the index number, as shown in Table 12, the younger the professional staff in a school. For example, school No. 1 reveals an age index of 1.95 which may be converted to an average age by taking the midpoint of the first interval (20-29) or 24.5 as equal to 1.00. The .95 represents 9.5 years or the average age of the professional staff in school No. 1 is 34.

The application of the analysis of variance technique resulted in an F ratio of 8.987 which was significant at the .01 level. The null hypothesis was rejected. It may be concluded that there was a difference between the age of the professional staff for the most innovative and least innovative schools.

The analysis relating to this hypothesis indicated that the younger educator was associated with schools which are more involved in innovation. The professional staff in the least innovative schools was 5.3 years older than the staff in most innovative schools. Thus, it may be stated, according to the data from this study, that older teachers resist or reject innovational practices more often than do younger teachers.

However, it must be pointed out that the data does not say that schools with older teachers will not be involved in innovational practices.

Table 12. Comparison of age of professional staff between the most innovative and least innovative schools

Most Innovative		Least Innovative	
School	Age Index	School	Age Index
1	1.95	16	1.80
2	1.70	17	2.20
3	1.84	18	2.62
4	2.10	19	2.52
5	1.85	20	3.77
6	2.26	21	2.19
7	2.74	22	3.45
8	2.11	23	2.41
9	2.33	24	3.56
10	2.04	25	2.96
11	2.52	26	2.36
12	2.73	27	3.57
13	2.29	28	3.67
14	1.94	29	1.62
15	2.04	30	2.64

M = 2.2293

M = 2.7573

df = 1/28

F Ratio = 8.987**

* Alpha = .05

R: F ≥ 4.20

** Alpha = .01

R: F ≥ 7.65

*** Alpha = .001

R: F ≥ 13.50

Hypothesis No. 4: Years of Service in a School and Innovation

"There is no significant difference between the years of service of the professional staff in a school for the most innovative and least innovative schools."

The participating schools were grouped according to innovation category in Table 13. The information on the years in the school was reported by a numerical index system. The smaller the index number the fewer the number of years in the school. The most innovative schools showed a mean index score of 1.3773. Converting this score, by the same procedure described earlier, the average number of years of service in the school by this group was 8.3 years. The least innovative schools show a mean index score of 1.9240 or actual years in the system of 14.1. This is a 5.8 years point spread between the two groups.

The application of the analysis of variance technique produced an F ratio of 12.044 which is significant beyond the .01 level.

The null hypothesis was therefore rejected and it may be concluded that there was a significant difference between the mean number of years in the school for the most innovative and least innovative schools.

The analysis of the data related to this hypothesis indicated the professional staff remain longer in the least innovative schools. Conversely, they remain a fewer number of years in the most innovative schools. The data indicated that educators remained in the more innovative schools 5.8 fewer years than did educators in the least innovative schools. It did not indicate the most appropriate number of years in the school for the professional staff to influence innovation.

Table 13. Comparison of years in the school system between the most innovative and least innovative schools

Most Innovative		Least Innovative	
School	Index of Years in System	School	Index of Years in System
1	1.00	16	1.04
2	1.00	17	1.87
3	1.05	18	1.86
4	1.30	19	1.96
5	1.02	20	2.31
6	1.48	21	1.57
7	1.04	22	2.09
8	1.61	23	1.35
9	1.53	24	3.00
10	1.00	25	1.62
11	1.52	26	2.05
12	1.60	27	2.71
13	1.90	28	2.40
14	1.45	29	1.23
15	1.56	30	1.80
	M = 1.3773		M = 1.9240

df = 1/28 F Ratio = 12.044**

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: F ≥ 4.20 R: F ≥ 7.65 R: F ≥ 13.50

Regarding the fewer number of years in the innovative school, it might be hypothesized that the professional staff which becomes involved in innovation remain in a school until the change is completed. Also, new challenges may require considerable mobility for this type of person. The nature of his intelligence, goals, and needs may require that he be involved in challenging experiences of change.

It may also be hypothesized that there is a higher turnover in the most innovative schools of some professional personnel because they find it difficult to cope with or accept the changes taking place in the school.

It might be assumed from the analysis of this data that educators who remain longer in a school or who have longer years of service, tend to reject or move more slowly toward changes in education.

Hypothesis No. 5: Size of Professional Staff and Level of Innovation

"There is no significant difference between the number of professional staff (size) in the school for the most innovative and least innovative schools."

Schools participating in the study were grouped according to innovational category. Mean scores were computed for the size of the professional staff of each school as shown in Table 14. The mean size of the most innovative schools was 48.867 professional staff members. The least innovative group showed a mean size of 21.333 or a 27.534 point difference. To be significant, the F ratio had to be greater than 4.20. The analysis revealed an F ratio of 10.784 which is significant at the .01 level.

The null hypothesis is therefore rejected. The results of this research indicated that there is a significant difference between the

Table 14. Comparison of the number of professional staff between the most innovative and least innovative schools

Most Innovative		Least Innovative	
School	Number of Staff	School	Number of Staff
1	90	16	26
2	70	17	17
3	90	18	37
4	104	19	26
5	13	20	15
6	29	21	25
7	18	22	11
8	53	23	20
9	15	24	8
10	80	25	45
11	45	26	27
12	15	27	10
13	21	28	16
14	35	29	12
15	45	30	25

M = 48.867   M = 21.333

df = 1/28   F Ratio = 10.784**

* Alpha = .05   ** Alpha = .01   *** Alpha = .001

R: $F \geq 4.20$ R: $F \geq 7.65$ R: $F \geq 13.50$

number of professional staff in the school for the most innovative and least innovative schools. The most innovative schools showed the larger number of professional staff.

The analysis of data relating to this hypothesis indicated that the larger schools are generally the implementors of innovation. Yet, it is interesting to note that of the 15 most innovative schools, there were 6 which contained fewer than 30 staff members, while the mean of staff members for this innovative category was 48.867. Even though the results indicated that the variable of size may influence innovation, it does not eliminate the smaller school as an implementor of innovational practices.

Hypothesis No. 6: Teacher-Administrator Perception of Climate in the Most Innovative Schools

"There is no significant difference between teacher perception and administrator perception of the school climate for the most innovative schools."

Separate climate mean scores were computed for the teachers and for the administrators of the most innovative schools. The purpose of this analysis was to determine if administrators actually perceived the climate differently than did the teacher.

Table 15 shows the O.C.D.Q. mean score for the school administrators was 65.40. The mean score for the teachers was 57.73 which is an 8 point difference. This may be compared with the mean score of 58.00 for all professional personnel of the innovative schools as shown in Table 10.

An F ratio of 4.61 was necessary to be significant. The computed F ratio between the two mean scores was 28.626 which indicated there

Table 15. A comparison of teacher perception and administrator perception of school climate for the most innovative schools

School	Climate Scores Administrators	Climate Scores Teachers
1	62	48
2	68	54
3	62	40
4	67	55
5	64	52
6	74	72
7	76	77
8	71	64
9	72	71
10	64	51
11	82	72
12	64	58
13	79	71
14	42	36
15	34	38
	M = 65.40	M = 57.73

df = 1/14 F = 28.626**

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: $F \geq 4.61$ R: $F \geq 8.90$ R: $F \geq 17.3$

is a significant difference at the .001 level. The null hypothesis was rejected and it may be concluded that there was a difference between teacher and administrator perception of school climate for the most innovative schools.

The analysis of data related to this hypothesis indicated that the administrator in the most innovative schools perceives the climate as more open than do the teachers. However, the teachers do view the climate as open.

Hypothesis No. 7: Teacher-Administrator Perception of Climate in the Least Innovative Schools

"There is no significant difference between teacher perception and administrator perception of the school climate for the least innovative schools."

Mean climate scores were computed for the teachers and administrators of the least innovative schools. The results are shown in Table 16. The mean score for the administrators was 36.71 and the teachers 38.07.

The F ratio for significance was 4.61. By applying the analysis technique the resulting F ratio for this hypothesis was 2.306 or below the level required for significance. The null hypothesis was accepted and it may be concluded that there was no difference between the teacher and administrator perception in the least innovative schools.

The analysis of the data related to this hypothesis shows that the administrator views the climate less favorable toward openness than do the teachers. They both see the climate as closed.

Table 16. A comparison of teacher perception and administrator perception of climate in the least innovative schools

School	Climate Scores - Admin.	Climate Scores - Teachers
16	32	36
17	36	38
18	64	60
19	30	36
20	35	35
21	38	37
22	35	39
23	38	36
24	33	35
25	40	36
26	34	38
27	34	33
28	35	37
29	33	38
30	32	36
	M = 36.71	M = 38.07

df = 1/13 F Ratio = 2.306 (N.S.)

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: F ≥ 4.61 R: F ≥ 8.90 R: F ≥ 17.3

Hypothesis No. 8: Openness and Expenditures per Student

"There is no significant difference between the expenditure per student in average daily attendance for the open climate schools and closed climate schools."

The participating schools were grouped according to open and closed climates as previously noted. The highest O.C.D.Q. scores were listed as open climate schools and the lowest scores as closed climate. The average expenditures per student in A.D.A. for each school was listed and the mean score for the two groups computed as shown in Table 17.

The mean expenditure per student in A.D.A. in open climate schools was $594.00 and $461.31 for closed climate schools. The application of the analysis technique produced an F ratio of 3.832. To be significant at the .05 level required an F ratio of 4.20. The null hypothesis was therefore accepted and it may be concluded that there was no difference between the expenditure per student in average daily attendance for open climate and closed climate schools.

An analysis of the data related to this hypothesis indicated that an open climate in a school is not dependent upon the expenditure level of maintenance and operation funds. The open climate school was not significantly affected by higher expenditures.

A comparison of the data of this hypothesis with that of expenditure level and innovation as noted in hypothesis # 2 revealed a different result. Expenditure of funds influenced innovational practices but failed to affect the school climate toward openness.

Table 17. Expenditures per student in A.D.A. grouped according to open and closed climate schools

Open Climate		Closed Climate	
School No.	ADA Expend.	School No.	ADA Expend.
1	$546	14	$548
2	457	15	444
3	497	16	335
4	625	17	469
5	675	19	610
6	660	20	340
7	590	21	524
8	673	22	445
9	387	23	404
10	524	24	360
11	358	25	325
12	854	26	557
13	410	27	680
18	439	28	390
		29	563
		30	387
	M = $549.00		M = $461.31

df = 1/28 F Ratio = 3.832 (N.S.)

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: $F \geq 4.20$ R: $F \geq 7.65$ R: $F \geq 13.50$

It may be hypothesized then, that adoption of innovational practices in a school is more sensitive to the expenditure level than is the school climate. Many innovational practices are directly supported by the purchase of educational hardware and software. School climate is essentially dealing with staff behavior and interpersonal relationships and is less sensitive to levels of financial support.

Hypothesis No. 9: Open School Climate and Innovation Scores

"There is no significant difference between innovation scores as measured by the Educational Innovation Checklist for open climate schools and closed climate schools."

Again the schools were grouped according to openness and closedness and the innovation scores listed for each school. The innovation mean score was computed. The open climate schools showed a mean of 48.21 and the closed climates 11.25 for a difference of 36.96 between the two groups. In Table 18 the analysis reveals an F ratio of 72.402 which is well above the ratio of 13.50 to be significant at the .001 level. The null hypothesis is rejected and it may be concluded that there was a difference between the schools involvement in innovation for the open and closed climate schools.

The analysis of the data related to this hypothesis indicated that schools with open climates are more deeply involved in the implementation of innovation in education.

Therefore, in order for innovation to take place, it is necessary to create a climate which leads to purposeful staff involvement and high staff morale.

Table 18. Comparison of educational innovation scores between open climate schools and closed climate schools

Open Climate Schools		Closed Climate Schools	
School No.	Innovation Scores	School No.	Innovation Scores
1	71	14	36
2	62	15	31
3	61	16	13
4	58	17	13
5	56	19	11
6	52	20	11
7	50	21	10
8	47	22	9
9	43	23	8
10	42	24	7
11	41	25	7
12	41	26	5
13	40	27	6
18	11	28	5
		29	5
		30	3
M = 48.21		M = 11.25	

df = 1/28

F Ratio = 72.402***

* Alpha = .05

R: F ≥ 4.20

** Alpha = .01

R: F ≥ 7.65

*** Alpha = .001

R: F ≥ 13.50

Hypothesis No. 10: Age of Professional Staff and Open and Closed Climate

"There is no significant difference between the age of the professional staff for the open climate schools and closed climate schools."

The age of the professional staff was converted to a numerical index system as explained in hypothesis #3. The schools age index was listed according to open climate schools and closed climate schools, as shown in Table 19. The numerical index mean was 2.22 for the open climate schools. By converting the numerical index into an actual average age it was found that the professional staff in the open climate schools had an average age of 36.7 years. The same procedure for the closed climate schools produced an average age of 41.2 years.

The above application of the analysis technique to the two means produced an F ratio of 4.503. The minimum F ratio to be significant at the ,05 level was established at 4.20. The F ratio was higher than the minimum and therefore reveals a significant difference at the .05 level. The null hypothesis was rejected and it may be concluded that there was a difference between the age of the professional staff for the open climate schools and closed climate schools.

The analysis of the data related to this hypothesis indicated that the professional staff is on the average 4.5 years younger in the open climate schools than in the closed climate schools. The study does not identify the best age for the staff to foster an open climate situation. One must exercise caution to avoid the implication that older educators are always found in closed climate schools.

Table 19: A comparison of the age of professional staff between open and closed climate schools

Open Climate		Closed Climate	
School No.	Index of Staff Age	School No.	Index of Staff Age
1	1.95	14	1.94
2	1.70	15	2.04
3	1.84	16	1.80
4	2.10	17	2.20
5	1.85	19	2.52
6	2.26	20	3.77
7	2.74	21	2.19
8	2.11	22	3.45
9	2.13	23	2.41
10	2.04	24	3.56
11	2.52	25	2.96
12	2.73	26	2.38
13	2.29	27	3.57
18	2.62	28	3.67
		29	1.62
		30	2.64
	M = 2.22		M = 2.67

df = 1/28

F Ratio = 4.503*

* Alpha = .05

** Alpha = .01

*** Alpha = .001

R: $F \geq 4.20$

R: $F \geq 7.65$

R: $F \geq 13.50$

Hypothesis No. 11: School Climate and Years of Service

"There is no significant difference between the years of service in a school of professional staff for the open climate and closed climate schools."

Participating schools were grouped in Table 20 according to the two climate categories and the years in the system listed according to a numerical index. The mean number of years the professional staff remained in the open climate schools was 4.45 years. The mean number of years in the school for the professional staff in the least innovative category was 6.88 years. This is a 2.43 years difference between the two groups.

The application of the analysis technique revealed an F ratio of 8.497 which was significant at the .01 level. The null hypothesis was therefore rejected. It may be concluded that there was a significant difference between the mean number of years in the school for the closed and open climate schools.

The analysis of the data related to this hypothesis indicated the professional staff remain longer in the closed climate school. Conversely, the professional staff remain 2.4 fewer years in the open climate school.

A careful study of the data provides no apparent reason why there is a higher turn over in the open climate schools than in the closed climate schools.

Hypothesis No. 12: School Climate and Staff Size

"There is no significant difference between the number of professional staff for the open climate schools and closed climate schools."

Table 20. A comparison of years in the school of professional staff between open and closed climate schools

Open Climate		Closed Climate	
School No.	Years in System	School No.	Years in System
1	1.00	14	1.45
2	1.00	15	1.56
3	1.05	16	1.04
4	1.30	17	1.87
5	1.62	19	1.96
6	1.48	20	2.31
7	1.04	21	1.57
8	1.61	22	2.09
9	1.53	23	1.35
10	1.00	24	3.00
11	1.52	25	1.62
12	1.60	26	2.05
13	1.90	27	2.71
18	1.86	28	2.40
		29	1.23
		30	1.80

M = 1.3936 M = 1.8756

df = 1/28 F Ratio = 8.497**

* Alpha = .05 ** Alpha = .01 *** Alpha = .001

R: F ≥ 4.20 R: F ≥ 7.65 R: F ≥ 13.50

The size of the school was determined by the number of professional staff employed. The number of staff members per school was grouped according to the appropriate climate category as shown in Table 21. A mean score was computed for each group. The open climate schools revealed a mean number of staff members of 49.29, with a range of 15 to 104. The mean for the closed climate group was 22.69, with a range of 8-45. The difference between the two means was 26.60 staff members.

The application of the analysis technique revealed an F ratio of 9.752 which indicates a significant difference exists at the .01 level. Therefore, the null hypothesis was rejected and it may be concluded that the results of this research indicate a difference exists between the number of professional staff (size) for the open climate schools and closed climate schools.

An analysis of the data related to this hypothesis indicated that the open climate schools show, on the average, a larger number of professional staff. This analysis does not preclude small schools from developing an open climate. As a matter of fact, 6 of the 14 open climate schools in this study were small schools of 30 staff members or fewer, as compared to the mean number of 49.29 for this innovative climate category. It may be hypothesized that a small school can develop an open climate, but the results of this study indicated the larger school has a greater potential for fostering an open climate.

Table 21. Comparison of the number of professional staff of the participating schools grouped according to open and closed climates

Open Climate		Closed Climate	
School	Number of Staff	School	Number of Staff
1	90	14	35
2	70	15	45
3	90	16	26
4	104	17	17
5	13	19	26
6	29	20	15
7	28	21	25
8	53	22	11
9	15	23	20
10	80	24	8
11	45	25	45
12	15	26	27
13	21	27	10
18	37	28	16
		29	12
		30	25

M = 49.29

M = 22.69

df = 1/28

F Ratio = 9.752**

* Alpha = .05	** Alpha = .01	*** Alpha = .001
R: F ≥ 4.20	R: F ≥ 7.65	R: F ≥ 13.50

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The Problem

The problem of this study was to determine those factors which inhibit or cause change to occur in a school system.

The Purpose of the Study

The purpose of this study was threefold: The first was to determine if there were significant differences between the organizational climate for the most innovative and the least innovative schools participating in the study. The study determined if a difference existed between expenditures per student for the most innovative and least innovative schools; between the age of the professional staff for the two categories of innovation; and between the years the professional staff member served in the school for the two innovative categories, and between the number of professional staff for the most and least innovative categories.

The second purpose explored if a difference existed between the teacher and administrator perception of school climate for the most innovative schools and the least innovative schools.

The third purpose was to determine if significant differences existed between the innovation scores of the participating schools for open and closed climates. The study determined if the differences existed between each of the four variables noted earlier (age, size, expenditures, and years in the school) for the two climate categories.

In an attempt to accomplish these purposes, the following null hypotheses were tested:

1. There is no significant difference between the level of organizational climate as measured by the O.C.D.Q. for the most innovative and least innovative schools.
2. There is no significant difference between the expenditure per student in average daily attendance for the most innovative and least innovative schools.
3. There is no significant difference between the age of the professional staff for the most innovative and the least innovative schools.
4. There is no significant difference between the years of service of the professional staff in a school for the most innovative and least innovative schools.
5. There is no significant difference between the number of professional staff (size) in the school for the most innovative and least innovative schools.
6. There is no significant difference in teacher perception and administrator perception of the school climate in the most innovative schools.
7. There is no significant difference in teacher perception and administrator perception of the school climate in the least innovative schools.
8. There is no significant difference between the expenditures

per student in average daily attendance for the open climate schools and closed climate schools.

9. There is no significant difference between innovation scores as measured by the Educational Innovation Checklist for open climate schools and closed climate schools.
10. There is no significant difference between the age of the professional staff for the open climate schools and closed climate schools.
11. There is no significant difference between the years of service in a school of professional staff for the open climate schools and closed climate schools.
12. There is no significant difference between the number of professional staff for the open climate schools and closed climate schools.

Procedures

The data were gathered from 1058 teachers and administrators from thirty schools in Idaho, Oregon, Washington, Utah and Nevada. The thirty participating schools were selected with the assistance of State Department of Education personnel of the five states and from the results of the Checklist of Educational Innovation as developed by Hinman (1966).

Halpin and Crofts' (1963) Organizational Climate Description Questionnaire was administered to the teachers and principals of the thirty schools to determine the climate of the school. The biographical and financial information needed for the study was obtained at the same time.

Mean scores were computed for innovational practices, school climate (O.C.D.Q.), and the four selected variables for the study.

Schools with the highest innovational practices scores were grouped in the most innovative category and the lowest in the least innovative category. An analysis of variance technique using an F ratio was utilized to test for differences between each of the four selected variables for the most innovative and the least innovative schools.

Teacher and administrator O.C.D.Q. responses were then separated and climate mean scores computed for these two groups. The analysis of variance technique was used to determine if differences existed between teacher and administrator perception of school climate for the most innovative category and for the least innovative category.

The thirty participating schools were then grouped according to open and closed climates. This was accomplished by placing the schools with the highest O.C.D.Q. scores in the open climate category and the lowest scores in the closed climate category. The same analysis technique noted above was used to determine if differences existed between each of the four selected variables for the two climate categories.

Findings

The first null hypothesis, that there was no significant differences between school climate and innovativeness, was rejected. It was determined that a significant difference at the .001 level existed between the O.C.D.Q. mean score of the most innovative schools and the least innovative schools.

The second null hypothesis, that expenditures per student in A.D.A. differed between the most innovative and least innovative schools, was rejected. The difference was at the .05 level. The expenditures were significantly higher for the schools classed as implementors of educational innovation than the least innovative schools.

The third null hypothesis, that there was no significant difference between the age of the professional staff for the most innovative and least innovative schools, was rejected. The difference was at the .01 level. The professional staff was younger in the most innovative schools.

The fourth null hypothesis, that there was no significant difference between the years of service in the school of the professional staff for the most innovative and least innovative schools, was rejected. The difference was at the .01 level. Specifically the findings indicated that the average tenure of the professional staff in a school was less for the schools which were involved in innovational practices.

The fifth null hypothesis, that there was no significant difference between the number of professional staff for the most innovative and least innovative schools, was rejected. The difference was at the .01 level. The most innovative schools showed the larger number of professional staff.

The sixth null hypothesis, that there was no significant difference between the teacher and principal perception of school climate in the innovative schools was rejected. It was determined that there was a difference at the .001 level. The teachers perceive the climate as open but they see it as less open than does the principal.

The seventh null hypothesis, that there was no significant difference between the teacher and principal perception of school climate in the least innovative schools, was accepted. The F ratio did not reveal a significance at the .05 level. The results indicate no differences exist between teacher and principal perception of climate in the least innovative category. Both perceive the climate as closed.

The eighth null hypothesis, that there was no significant difference between the expenditures per student for the open climate and closed climate schools, was accepted. In this case, the difference in average expenditure per student for the two innovation categories failed to reach the .05 level. Higher expenditure level per student from maintenance and operational funds did not result in an open climate school.

The ninth null hypothesis, that there was no significant difference between innovational scores for open and closed climate schools, was rejected. The difference was at the .001 level. Schools which adopt innovational practices also show open climates.

The tenth null hypothesis, that there was no significant difference between the age of the professional staff for the open and closed climate schools, was rejected. The difference was at the .05 level. The findings indicate that the younger staff members tend to remain in the open climate schools.

The eleventh null hypothesis, that there was no significant difference between the number of years in the school of the professional staff for the open climate and closed climate schools, was rejected. The difference was at the .01 level. Teachers and administrators tend to remain fewer number of years in the open climate schools.

The twelfth null hypothesis, that there was no significant difference between the number of professional staff for the open climate and closed climate schools, was rejected. The difference was at the .01 level. The rejection of this null hypothesis indicated that the schools with the larger number of professional staff were those with open climates.

Conclusions

In analyzing the data reported in this study it was determined that ten of the twelve null hypotheses could be rejected.

Differences:

Innovation and selected variables. In analyzing the differences between the four selected variables for the most innovative and least innovative schools it may be concluded:

1. That schools involved in innovational practices have an open climate. The least innovative schools were characterized by closed climates.

2. That schools involved in implementation of innovation in education were schools associated with higher expenditures per student; however, risk funds showed a greater impact than expenditures per student on educational change.

3. That teachers and administrators were generally younger in the more innovative schools. The inference is that younger

teachers are more often involved in implementation of innovation in education than older teachers.

4. That the professional staff remain fewer number of years in the most innovative schools than in the least innovative schools.

5. That the most innovative schools were also generally the larger schools based on the number of professional staff.

Teacher-principal perception of climate and innovation. In analyzing the differences between the teacher and principal perception of school climate for the two innovation categories it may be concluded:

6. That the principal of the most innovative schools perceived the climate as more open than did the teachers; however, the teachers still viewed the climate as open.

7. That the teachers and principal in the least innovative schools perceived the climate as the same. They viewed the climate as closed.

Climate and selected variables. In analyzing the differences between the four selected variables for the open and closed climate schools it may be concluded:

8. That an open climate school is not dependent upon the level of expenditures per student.

9. That an open climate school is also a school involved in implementation of innovational practices.

10. That the younger teachers and administrators were found in the open climate schools.

11. That schools where the professional staff had a fewer number of years in the school also showed an open climate.

12. That the larger number of professional staff was found in the open climate schools.

General Summary of Conclusions

In summarizing the conclusions made from this study, it can be stated that schools involved in innovational practices were also characterized by open climates, higher expenditures per student, younger professional staff, lower tenure in the school, and a larger number of professional staff.

It was determined that principals in the most innovative schools perceive the climate as more open than do the teachers; however, the teachers still viewed the climate as open.

Younger teachers, larger number of professional staff, and the lower mean number of years at a school were associated with the open climate schools.

Recommendations

The foregoing conclusions suggest further inquiry should provide additional information which may be useful in further identification of the factors which influence implementation of innovation in a school.

On the basis of the data from this study, the conclusion reached from the statistical treatment of the data, and the review of related research, the following recommendations are made:

1. A similar study should be conducted to include a sampling of all schools in the five state area, rather than a dichatomized selection as was done by this project. Such

a study may provide insights into what causes change in an organization by exploring the interrelationships among types of decision making processes, organizational climate and implementation of innovation in education.

The Checklist of Educational Innovation should be updated and refined. The instrument should be based on the innovative practices in existance in the area being sampled.

2. There have been numerous studies which have used the O.C.D.Q. as a research instrument. If this fund of data already on hand should be collated and synthesized, it might provide vital information about organizational climate. Further, this information may be useful in analyzing the O.C.D.Q. with the possibility of making refinements to the instrument.
3. There seems to be a need for a study where pre- and post-measures have been administered by use of the O.C.D.Q. with a change-treatment introduced between the two measures. Extreme caution would have to be exercised to provide sufficient time for the change-treatment to influence the organization. On the other hand, too much time would permit other variables to significantly influence the results.
4. A research project might be considered to explore the relationship between the central administrative organization of a school system and the organizational climate of the schools that compose that system.
5. Other points on which the evidence in this study did not corroborate earlier findings involved the relationship between age, expenditures per student, years in the school and

involvement in implementation of innovation in education. Rogers (1966) found similar results as did this research, which indicated that innovators were generally young. Studies by Reynolds (1966), Carnie (1966) and Lawrence (1967) found no relationship between age, years in a position and innovativeness. Further research might clarify this inconsistancy.

6. The results of this study have implications for administrative training programs. Universities and colleges should be concerned with predicting the type of leaders which beginning candidates in educational administration might become. It seems reasonable to expect training institutions to assist school districts in identifying the type of administrator required to accomplish the objective of the school system, select those people with appropriate characteristics required in leadership positions and initiate training programs that will build upon their innate characteristics.

After the identification of appropriate characteristics for leadership, it would seem feasible to develop an instrument for the purpose of screening prospective administrators for employment and advanced training. This device, coupled with a personality prediction equation suggested by Lawrence (1967), might serve as a beginning point for greater reliability and sophistication of the selection and training for school administrators.

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APPENDIXES

Appendix A

Educational Innovation Checklist

A. Introduction to the Checklist of Educational Innovation

In making an inventory of innovations for the State of New York, Brickell identified six structural elements of schools: Teachers, Students, Methods, Subjects, Times, and Places. He indicated that innovation at the school level often requires major shifts in one of these structural elements. The Checklist of Educational Innovation follows Brickell's pattern.

B. Directions for use of the Checklist of Educational Innovation

Different checklists are provided for elementary and secondary levels. Complete the checklist applicable to your level of administration. Principals of schools are asked to indicate those innovations which have been implemented during the period of September 1, 1962, and January 1, 1967. Only those innovations which can be verified by the principal should be checked. The degree of involvement* of schools should be indicated by scoring as indicated below.

0 - Innovation has not been implemented
1 - Less than 25% involvement
2 - 25% to 75% involvement
3 - More than 75% involvement

*The degree of involvement of students in numbers and time.

This checklist was developed by Edna Hinman in her Doctoral dissertation at Utah State University, 1966. It includes all the innovations in the Clark County Schools (Nevada) which have required structural modification and have been implemented since September 1, 1962.

This study approved by: U. S. Office of Education
Bureau of Research
# 7-8119 Project

and

Department of Educational Administration
Utah State University
Logan, Utah

CHECKLIST OF EDUCATIONAL INNOVATION

SECONDARY

I. Scheduling (Time)

_____ 1. Individual - Day by Day, Week by Week
_____ 2. Modular Scheduling
_____ 3. Drop a Day
_____ 4. Extended Day - Week or School Year
_____ 5. Block
_____ 6. Other (describe) ______________________________

II. Staff Utilization (Teachers, etc.)

_____ 1. Team or Cooperative Teaching
_____ 2. Team Supervision (Team members observe and critique one another)
_____ 3. Research and Development Specialist
_____ 4. Teacher Aides, Lay Readers, Student Aides, Volunteer Unpaid Aides
_____ 5. Team, Department, or School Head
_____ 6. Other (describe) ______________________________

III. Procedures (Methods)

_____ 1. Seminars, Problems or Advanced Placement
_____ 2. Independent Study, Programmed Learning
_____ 3. Language Labs
_____ 4. Testing for Credit
_____ 5. Work Experience, Apprenticeships
_____ 6. Other (describe) ______________________________

IV. Organization (Students)

_____ 1. Dual Progress, Multi-Track
_____ 2. Ungraded, Multi-age, Phasing, Continuous Progress
_____ 3. Separate Schools or Houses
_____ 4. Fluid Grouping within Teams, Flexible, Large, Small Groups, Seminar, Discussion, Interest
_____ 5. Tutorial
_____ 6. Other (describe) ______________________________

V. Curriculum (Subjects)

_____ 1. Modern Mathematics
_____ 2. New Science (BSSC, PSSC, CHEM, etc.)
_____ 3. Speed Reading Courses, Reading Labs, Remedial Reading, Reading Clinics
_____ 4. Data Processing Courses, Technological Training
_____ 5. Leisure Time Development (Golf, Tennis, Hobbies, etc.)
_____ 6. Other (describe) ______________________________

VI. Facilities (Places)

_____ 1. School or Departmental Resource Centers, Teacher Work Rooms
_____ 2. Electronically Equipped Study Carrells
_____ 3. "School," Departmental, or Team Conference Centers
_____ 4. Large and Small Group Instructional Centers, Individual Practice Rooms
_____ 5. "Open Laboratories" Student Work Rooms
_____ 6. Other (describe) ____

CHECKLIST OF EDUCATIONAL INNOVATION

ELEMENTARY

I. Scheduling (Time)

_____ 1. Individual - Day by Day, Week by Week, Fluid Within Groups
_____ 2. Staggered Reading (one group comes early, one remains late)
_____ 3. Extended Day, Wekk or School Year
_____ 4. Master Schedule for Special Classes (Art, Music, P. E., Science, Math, etc.)
_____ 5. Special Classes (Talent Development, etc.)
_____ 6. Other (describe) _______________________________

II. Staff Utilization (Teachers)

_____ 1. Team Teaching, Cooperative Teaching
_____ 2. Specialists, Elementary Art, Music, P. E., Math, Science, etc.
_____ 3. Teacher Aides, Student Aides, Volunteer Unpaid Aides
_____ 4. Resource Teachers (non-teaching)
_____ 5. Elementary Guidance Counselor
_____ 6. Other (describe) _______________________________

III. Procedures (Methods)

_____ 1. Programmed Learning, Independent Study, Reading, Social Studies or Science Labs
_____ 2. Inquiry Training, Critical Thinking, Study and Library Skills (as special courses)
_____ 3. Electronic Language Lab
_____ 4. Individualized Reading
_____ 5. Other (describe) _______________________________

IV. Organization (Students)

_____ 1. Platoon, Dual Progress
_____ 2. Ungraded, Multi-Age, Multi-Grade
_____ 3. Fluid Grouping Within Teams
_____ 4. Flexible, Large Groups, Small Groups
_____ 5. Departmental
_____ 6. Other (describe) _______________________________

V. Curriculum (Subjects)

_____ 1. Foreign Language
_____ 2. Modern Mathematics
_____ 3. New Science (ESCS, etc.)
_____ 4. Creativity, Talent Development, Special Interest (as special courses)
_____ 5. Other (describe) _______________________________

VI. Facilities (Places)

_____ 1. Science Laboratory
_____ 2. Electronically Equipped Study Carrells
_____ 3. School, Team or Department Resource Centers
_____ 4. School, Team or Department Conference Centers
_____ 5. Large and Small Group Instruction Centers
_____ 6. Other (describe) _______________________________

Appendix B

Worksheet for Special Information

Brief Explanation

This worksheet is a guide for obtaining the answers to questions on the "yellow" sheet. The worksheet is provided to keep as much uniformity as possible in reporting over the five (5) states. I realize this information may not be readily available in some states and will require that you obtain the best information that is available to complete the report. We feel this information may be highly significant to relationships which may develop as the project progresses and solicit your support in obtaining the most accurate figures possible.

1. Number of Students in A.D.A.

   Report the school's Average Daily Attendance as of the close of the 1965-66 school year.

2. Number of Teachers Employed 1965-66.

   Report those administrators and teachers who are under the direct supervision of the principal. Also, include those employees who provide special services for your school such as guidance, reading specialists, etc. as a percent of their total time which they work at your school. All personnel should be listed as full-time equivalent.

Example:	Principal and Teachers . . .	20.50
	Guidance Counselor	.33
	Reading Specialist	.50
	Total full-time employees	21.33

3. Expenditures Per Student in A.D.A. 1965-66.

   This figure may be difficult to determine. However, it is important that all participating schools calculate the expenditures per A.D.A. on the same basis. Please follow this outline if at all possible. You may have to make a few estimates if you don't have actual cost figures.

   a. Obtain the salaries for all persons employed as listed in 2 above. (If the guidance counselor listed above receives a salary of $6600 then you will include only 1/3, or $2200 in your total, etc.)

   Total for salaries . . . $ ________

   b. Instructional costs: (No federal funds under ESEA) Supplies, textbooks (no equipment) library books and such items normally included in this category. $ ________

   c. Operation of plant
      Custodial Salaries $ ________
      Fuel, lights, water, etc. $ ________
      Custodial Supplies $ ________
      Other plant costs $ ________ $ ________

d. Maintenance of the plant (You may have to make an estimate after consulting with the Central Office) $ __________

e. Capital Outlay expenditures for apparatus, maps and furniture (no ESEA funds, bond funds, etc.) List only items purchased from school district current or Maintenance & Operation funds. $ __________

Total Expenditures . . . . . . $ __________

d. Maintenance of the plant (You may have to make an estimate after consulting with the Central Office) $ __________

e. Capital Outlay expenditures for apparatus, maps and furniture (no ESEA funds, bond funds, etc.) List only items purchased from school district current or Maintenance & Operation funds. $ __________

Total Expenditures . . . . . . $ __________

#2 Worksheet for Special Information

Expenditures per child in A.D.A.

Divide total expenditures above by the school's A.D.A. in 1 above:

__________________ + ________ = $ ____________________ per A.D.A.
Expenditures   A.D.A.

4. "RISK" Funds

Risk funds are those funds made available through foundations or special appropriations provided from local, state, or federal which are over and above the "usual" amounts available to your school. These "risk" funds are monies which may be used for a variety of different or innovative purposes without the "usual" restrictions. The staff and/or administrator would have almost unrestricted flexibility in the use of these funds, even though they would need to be accounted for through the usual audit and accounting procedures.

Examples: Title I - E.S.E.A.
Title III - E.S.E.A.
Ford Foundation
Special stipends received from the local school district funds or state funds to initiate or operate a program(s) beyond that which you would classify as your regular school program.

				A.D.A. Expend.
Total "RISK" Funds -	1966-67 school year	$ ________	+ A.D.A. =	____________
	1965-66	$ ________	+ A.D.A. =	____________
	1964-65	$ ________	+ A.D.A. =	____________
	1963-64	$ ________	+ A.D.A. =	____________

Principal ______________________ School ________________________

Address ________________________ Telephone _____________________

Special Information

To be completed by the School Principal
(See separate worksheet for instructions)

1. Number of students in A.D.A. (1965-66) (1)

99 or less 1. _____
100 - 199 2. _____
200 - 299 3. _____
300 - 399 4. _____
400 - 499 5. _____
500 - 599 6. _____
600 - 699 7. _____
700 - 799 8. _____
800 - 899 9. _____
900 - 999 10. _____
1000 or more 11. _____

2. Number of teachers and administrators employed (1965-66) (2)

9 or less 1. _____
10 - 14 2. _____
15 - 19 3. _____
20 - 24 4. _____
25 - 29 5. _____
30 - 34 6. _____
35 - 39 7. _____
40 - 44 8. _____
45 or more 9. _____

3. Expenditures per student in A.D.A. (1965-66) (3)

$199 or less 1. _____
200 - 249 2. _____
250 - 299 3. _____
300 - 349 4. _____
350 - 399 5. _____
400 - 449 6. _____
$450 - 499 7. _____
500 - 549 8. _____
550 - 599 9. _____
600 - 649 10. _____
650 or more 11. _____

4. "RISK" funds available to your school per A.D.A. (Average Daily Attendance of the year the funds were available.) List the actual dollars figure per A.D.A. in the proper space instead of a check mark.

	1966-67	1965-66	1964-65	1963-64
None	1. _____	1. _____	1. _____	1. _____
0 - $49	2. _____	2. _____	2. _____	2. _____
50 - 99	3. _____	3. _____	3. _____	3. _____
100 - 149	4. _____	4. _____	4. _____	4. _____
150 - 199	5. _____	5. _____	5. _____	5. _____
200 - 249	6. _____	6. _____	6. _____	6. _____
250 - 299	7. _____	7. _____	7. _____	7. _____
300 or more	8. _____	8. _____	8. _____	8. _____

Appendix C

Biographical Information

5-7. School : ______________________________ Location ________________
(Write in the name of school)

Please place a check mark to the right of the appropriate category.

8. Position:
Principal 1. _____
Teacher 2. _____
Other 3. _____

9. Sex:
Man 1. _____
Woman 2. _____

10. Age:
20-29 1. _____
30-39 2. _____
40-49 3. _____
50-59 4. _____
60 or over 5. _____

11. Years of experience in education:
0- 9 1. _____
10-19 2. _____
20-29 3. _____
30 or over 4. _____

12. Years at this school:
0- 4 1. _____
5- 9 2. _____
10-19 3. _____
20 or over 4. _____

Organizational Climate Description Questionnaire

The items in this questionnaire describe typical behaviors or conditions that occur within a school organization. Please indicate to what extent each of these descriptions characterizes *your school*. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the Instruction which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they must work. After you have answered the questionnaire we will examine the behaviors or conditions that have been described as typical by the majority of the teachers in your school, and we will construct from this description, a portrait of the Organizational Climate of your school.

The Questionnaire

The *Organizational Climate Description Questionnaire* was developed by Andrew W. Halpin and Don B. Croft at the University of Chicago. The Questionnaire is used and reprinted for this study with permission of The Macmillan Company from "Theory and Research In Administration" by A. W. Halpin. Copyright, Andrew W. Halpin, 1966.

Marking Instructions

Printed below is an example of a typical item found in the *Organizational Climate Description Questionnaire*.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Teachers call each other by their first names. 1 2 [✓ 3] 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly, as in the example. *PLEASE BE SURE THAT YOU MARK EVERY ITEM.*

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

13. Teachers' closest friends are other faculty members at this school. 1 2 3 4

14. The mannerisms of teachers at this school are annoying. 1 2 3 4

15. Teachers spend time after school with students who have individual problems. 1 2 3 4

16. Instructions for the operation of teaching aids are available. 1 2 3 4

17. Teachers invite other faculty to visit them at home. 1 2 3 4

18. There is a minority group of teachers who always oppose the majority. 1 2 3 4

19. Extra books are available for classroom use. 1 2 3 4

20. Sufficient time is given to prepare administrative reports. 1 2 3 4

21. Teachers know the family background of other faculty members. 1 2 3 4

22. Teachers exert group pressures on non-conforming faculty members. 1 2 3 4

23. In faculty meetings, there is a feeling of "let's get things done." 1 2 3 4

24. Administrative paper work is burdensome at this school. 1 2 3 4

25. Teachers talk about their personal life to other faculty members. 1 2 3 4

26. Teachers seek special favors from the principal. 1 2 3 4

27. School supplies are readily available for use in classwork. 1 2 3 4

28. Student progress reports require too much work. 1 2 3 4

29. Teachers have fun socializing together during school time. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

30. Teachers interrupt other faculty members who are talking in staff meetings. 1 2 3 4

31. Most of the teachers here accept the faults of their colleagues. 1 2 3 4

32. Teachers have too many committee requirements. 1 2 3 4

33. There is considerable laughter when teachers gather informally. 1 2 3 4

34. Teachers ask nonsensical questions in faculty meetings. 1 2 3 4

35. Custodial service is available when needed. 1 2 3 4

36. Routine duties interfere with the job of teaching. 1 2 3 4

37. Teachers prepare administrative reports by themselves. 1 2 3 4

38. Teachers ramble when they talk in faculty meetings. 1 2 3 4

39. Teachers at this school show much school spirit. 1 2 3 4

40. The principal goes out of his way to help teachers. 1 2 3 4

41. The principal helps teachers solve personal problems. 1 2 3 4

42. Teachers at this school stay by themselves. 1 2 3 4

43. The teachers accomplish their work with great vim, vigor, and pleasure. 1 2 3 4

44. The principal sets an example by working hard himself. 1 2 3 4

45. The principal does personal favors for teachers. 1 2 3 4

46. Teachers eat lunch by themselves in their own classrooms. 1 2 3 4

47. The morale of the teachers is high. 1 2 3 4

48. The principal uses constructive criticism. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

49. The principal stays after school to help teachers finish their work. 1 2 3 4

50. Teachers socialize together in small select groups. 1 2 3 4

51. The principal makes all class-scheduling decisions. 1 2 3 4

52. Teachers are contacted by the principal each day. 1 2 3 4

53. The principal is well prepared when he speaks at school functions. 1 2 3 4

54. The principal helps staff members settle minor differences. 1 2 3 4

55. The principal schedules the work for the teachers. 1 2 3 4

56. Teachers leave the grounds during the school day. 1 2 3 4

57. The principal criticizes a specific act rather than a staff member. 1 2 3 4

58. Teachers help select which courses will be taught. 1 2 3 4

59. The principal corrects teachers' mistakes. 1 2 3 4

60. The principal talks a great deal. 1 2 3 4

61. The principal explains his reasons for criticism to teachers. 1 2 3 4

62. The principal tries to get better salaries for teachers. 1 2 3 4

63. Extra duty for teachers is posted conspicuously. 1 2 3 4

64. The rules set by the principal are never questioned. 1 2 3 4

65. The principal looks out for the personal welfare of teachers. 1 2 3 4

66. School secretarial service is available for teachers' use. 1 2 3 4

67. The principal runs the faculty meeting like a business conference. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

68. The principal is in the building before teachers arrive. 1 2 3 4

69. Teachers work together preparing administrative reports. 1 2 3 4

70. Faculty meetings are organized according to a tight agenda. 1 2 3 4

71. Faculty meetings are mainly principal-report meetings. 1 2 3 4

72. The principal tells teachers of new ideas he has run across. 1 2 3 4

73. Teachers talk about leaving the school system. 1 2 3 4

74. The principal checks the subject-matter ability of teachers. 1 2 3 4

75. The principal is easy to understand. 1 2 3 4

76. Teachers are informed of the results of a supervisor's visit. 1 2 3 4

77. Grading practices are standardized at this school. 1 2 3 4

78. The principal insures that teachers work to their full capacity. 1 2 3 4

79. Teachers leave the building as soon as possible at day's end. 1 2 3 4

80. The principal clarifies wrong ideas a teacher may have. 1 2 3 4

Appendix D

OCDQ Items That Compose Four Subtests: Teachers' Behavior

I. Disengagement

2. The mannerisms of teachers at this school are annoying.
6. There is a minority group of teachers who always oppose the majority.
10. Teachers exert group pressure on non-conforming faculty members.
14. Teachers seek special favors from the principal.
18. Teachers interrupt other faculty members who are talking in staff meetings.
22. Teachers ask nonsensical questions in faculty meetings.
30. Teachers at this school stay by themselves.
61. Teachers talk about leaving the school system.
38. Teachers socialize together in small select groups.

II. Hindrance

24. Routine duties interfere with the job of teaching.
20. Teachers have too many committee requirements.
16. Student progress reports require too much work.
12. Administrative paper work is burdensome at this school.
-8. Sufficient time is given to prepare administrative reports.
-4. Instructions for the operation of teaching aids are available.

III. Esprit

35. The morale of the teachers is high.
31. The teachers accomplish their work with great vim, vigor and pleasure.
27. Teachers at this school show much school spirit.
23. Custodial service is available when needed.
19. Most of the teachers here accept the faults of their colleagues.
15. School supplies are readily available for use in classwork.
21. There is considerable laughter when teachers gather informally.
11. In faculty meetings, there is the feeling of "let's get things done."
7. Extra books are available for classroom use.
3. Teachers spend time after school with students who have individual problems.

IV. Intimacy

1. Teachers' closest friends are other faculty members at this school.
5. Teachers invite other faculty members to visit them at home.
9. Teachers know the family background of other faculty members.
13. Teachers talk about their personal life to other faculty members.
17. Teachers have fun socializing together during school time.
57. Teachers work together preparing administrative reports.
-25. Teachers prepare administrative reports by themselves.

OCDQ Items That Compose Four Subtests: Principal's Behavior

V. Aloofness

58. Faculty meetings are organized according to a tight agenda.
59. Faculty meetings are mainly principal-report meetings.
55. The principal runs the faculty meeting like a business conference.
44. Teachers leave the ground during the school day.
34. Teachers eat lunch by themselves in their own classrooms.
52. The rules set by the principal are never questioned.
40. Teachers are contacted by the principal each day.
-54. School secretarial service is available for teachers' use.
-64. Teachers are informed of the results of a supervisor's visit.

VI. Production Emphasis

39. The principal makes all class scheduling decisions.
43. The principal schedules the work for the teachers.
62. The principal checks the subject matter ability of teachers.
47. The principal corrects teachers' mistakes.
66. The principal insures that teachers work to their full capacity.
51. Extra duty for teachers is posted conspicuously.
48. The principal talks a great deal.

VII. Thrust

28. The principal goes out of his way to help teachers.
32. The principal sets an example by working hard himself.
36. The principal uses constructive criticism.
41. The principal is well prepared when he speaks at school functions.
49. The principal explains his reasons for criticism to teachers.
53. The principal looks out for the personal welfare of teachers.
56. The principal is in the building before teachers arrive.
60. The principal tells teachers of new ideas he has run across.
63. The principal is easy to understand.

VIII. Consideration

29. The principal helps teachers solve personal problems.
33. The principal does personal favors for teachers.
37. The principal stays after school to help teachers finish their work.
42. The principal helps staff members settle minor differences.
46. Teachers help select which courses will be taught.
50. The principal tries to get better salaries for teachers.

Appendix E

The Eight Dimensions of Organizational Climate

Teachers' Behavior

1. Disengagement refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motions," a group that is "not in gear" with respect to the task at hand. It corresponds to the more general concept of anomie as first described by Durkheim. In short, this subtest focuses upon the teachers' behavior in a task-oriented situation.

2. Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary "busywork." The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit refers to morale. The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Principal's Behavior

5. Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation. His behavior, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, he keeps himself - at least, "emotionally" - at a distance from his staff.

6. Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive and plays the role of a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." Thrust behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets.

Apparently, because he does not ask the teachers to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nonetheless viewed favorably by the teachers.

8. Consideration refers to behavior by the principal which is characterized by an inclination to treat the teachers "humanly," to try to do a little something extra for them in human terms.

The Open Climate

The Open Climate depicts a situation in which the members enjoy extremely high Esprit. The teachers work well together without bickering and griping (low Disengagement). They are not burdened by mountains of busywork or by routine reports; the principal's policies facilitate the teachers' accomplishment of their tasks (low Hindrance). On the whole, the group members enjoy friendly relations with each other, but they apparently feel no need for an extremely high degree of Intimacy. The teachers obtain considerable job satisfaction, and are sufficiently motivated to overcome difficulties and frustrations. They possess the incentive to work things out and to keep the organization "moving." Furthermore, the teachers are proud to be associated with their school.

The behavior of the principal represents an appropriate integration between his own personality and the role he is required to play as principal. In this respect his behavior can be viewed as genuine. Not only does he set an example by working hard himself (high Thrust) but, depending upon the situation, he can either criticize the actions of teachers or go out of his way to help a teacher (high Consideration). He possesses the personal flexibility to be genuine whether he be required to control and direct the activities of others or to show compassion in satisfying the social needs of individual teachers. He has integrity in that he is "all of a 'iece" and therefore can function well in either situation. He is not aloof, nor are the rules and procedures which he sets up inflexible and impersonal. Nonetheless, the rules and regulations that he adheres to provide him with subtle direction and control for the teachers. He does not have to emphasize production; nor does he need to monitor the teachers' activities closely, because the teachers do, indeed, produce easily and freely. He does not do all the work himself because he has the ability to let appropriate leadership acts emerge from the teachers (low Production Emphasis). Withal, he is in full control of the situation, and he clearly provides leadership for the staff.

The Closed Climate

The Closed Climate marks a situation in which the group members obtain little satisfaction in respect to either task-achievement or social-needs. In short, the principal is ineffective in directing the activities of the teachers; at the same time, he is not inclined to look out for their personal welfare. This climate is the most closed and the least genuine climate that we have identified.

The teachers are disengaged and do not work well togehter; consequently, group achievement is minimal (high Disengagement). To secure some sense of achievement, the major outlet for the teachers is to complete a variety of reports and to attend to a host of "housekeeping" duties. The principal does not facilitate the task-accomplishment of the teachers (high Hindrance). Esprit is at a nadir, reflecting low job satisfaction in respect to both job satisfaction and social-needs satisfaction. The salient bright spot that appears to keep the teachers in the school is that they do obtain satisfaction from their friendly relations with other teachers (average Intimacy).

The principal is highly aloof and impersonal in controlling and directing the activities of the teachers (high Aloofness). He emphasizes production and frequently says that "we should work harder." He sets up rules and regulations about how things should be done, and these rules are usually arbitrary (high Production Emphasis). But his words are hollow, because he, himself, possesses little Thrust and he does not motivate the teachers by setting a good personal example. Essentially, what he says and what he does are two different things. For this reason, he is not genuine in his actions. He is not concerned with the social needs of teachers; in fact, he can be depicted as inconsiderate (low Consideration). His cry of "let's work harder" actually means, "you work harder." He expects everyone else to take the initiative, yet he does not give them the freedom required to perform whatever leadership acts are necessary for the group. For this reason the teachers view him as not genuine; indeed, they regard him as a "phony." This climate characterizes an organization for which the best prescription is radical surgery.

VITA

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